TWR-17542 Vol. IX

FLIGHT SET 360L003
INSTRUMENTATION FINAL TEST REPORT

5 May 1989

Prepared for:

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GEORGE C. MARSHALL SPACE FLIGHT CENTER
MARSHALL SPACE FLIGHT CENTER, ALABAMA 35812

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MORTON THIOKOL, INC.

Aerospace Group

Space Operations

P.O. Box 707, Brigham City, Utah 84302-0707 (801) 863-3511

FLIGHT SET 360L003
INSTRUMENTATION FINAL TEST REPORT

Prepared by:

Instrumentation Design

Approved by:

Instrumentation Design Supervisor

Systems Test and Support Manager

Project Engineering

Program Manager

P C Tydeck 5-5-89
Data Management
ECS #: 1011

Reliability

System Safety

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1.0 INTRODUCTION

This report summarizes post-flight instrumentation hardware and data evaluations for 360L003.

The 360L003 motors were equipped with Developmental Flight Instrumentation (DFI), Operational Flight Instrumentation (OFI), and Ground Environment Instrumentation (GEI). The DFI was designed to measure strain, temperature, pressure, and vibration at various locations on the motor during flight. The DFI is used to validate engineering models in a flight environment. The OFI consists of six Operational Pressure Transducers (OPTs) which monitor chamber pressure during flight. These pressure transducers are used in the SRB separation cue. GEI measures the motor case, igniter flange, and nozzle temperatures prior to launch.

2.0 APPLICABLE DOCUMENTS

The latest revision of the following documents are applicable to the extent specified herein.

TWR-15968	Interim Summary/Status Pressure Transducer Investigation
ICD 3-44005	SRB to SRM Electrical and Instrumentation Subsystems

3.0 SUMMARY

3.1 Hardware Inspection Summary

Overall, the post flight condition of the instrumentation was excellent. There was substantially less damage on this flight set than there has been on the past two flights. There were a total of 21 aft edge hits caused by re-entry debris. This compares to well over 100 aft edge hits on past flights. Cork was also missing just forward of the kick-ring joint. This cork is normally blown away due to air and water trapped inside the aft skirt at splash down. However, greater amounts of soot were deposited on broken edges of the cork than was apparent in the past. The MTI and MSFC Teams concluded that this was due to greater amounts of soot and burning foam in the aft skirt caused by separation of the exit cone at apogee. The Ice and Debris Team did not agree and a PR was written. Cork samples were removed and sent to the Malfunction Lab. No conclusions were available at the time of this writing.

All cabling and sensors were inspected and determined to be in nominal condition with the exception of the aft dome area and two accelerometers. Because the exit cone was separated at apogee, there was a greater amount of heating and sooting inside the aft skirt than there has been in the past. There was, however, less water impact damage. In the past much of the cabling is completely torn off. The cabling on the aft domes on this flight remained intact at the connectors. This caused a problem in that the cables hung down around the nozzle and the divers had to work around them to insert the nozzle plug. The divers were told that they could cut these cables if the problem occurs in the future.

Two accelerometers, B08D7175A and B08D8177A were not tightly secured to their mounting blocks at the time of inspection. These accelerometers are inspected after the accelerometer assemblies are hydrolased from the motor and disassembled. The data was reviewed and appears to be normal, indicating that the loosening was a post-flight event. Since the accelerometers are enclosed in a fairing, there is no debris concerns with the loose accelerometers. All accelerometers and low pressure fairings were tightly bonded to the motor cases.

3.2 Data Performance Summary

360L003 contained 531 channels of instrumentation - 417 DFI, 6 OFI, and 108 GEI. Of the 417 channels of DFI, 28 were waived. 375 (96.4%) of the remaining 389 functioned properly throughout their respective mission phase. 105 (97.2%) out of 108 GEI gages and 6 (100%) OFI gages functioned properly throughout their phase of the mission. Excluding gages which were waived, 486 (97%) of the remaining 503 DFI, GEI and OFI gages performed as expected. This is an acceptable percentage. All launch commit criteria gages were functioning prior to launch.

Girth gages on both the right and left hand motor showed data spikes similar to those seen on 360L001 and 360L002. The data spikes occur during ignition transient, and seem to be present only in girth gage data. Also, several girth gages on the right motor showed a .25 second lag from the expected strain curve. The causes of these anomalies have not been determined, although there is reason to believe that they are related.

Approximately 29% of nozzle and aft dome instrumentation was lost during max reentry or chute deployment (Appendix B). The loss of these measurements severely reduces the ability to measure and understand splash down loads.

4.0 CONCLUSIONS

4.1 Hardware Condition

The condition of the instrumentation and associated TPS is excellent. The MTI and MSFC Teams agree that there are no debris issues. However, at the request of the Debris Team some cork samples were evaluated at the Malfunction Lab to determine if cork next to the kick-ring joint could have come off in Flight. Lab tests were inconclusive.

4.2 Data Conclusions

The data recovered from 360L003 was good with few exceptions. A few anomalies were noted on girth gages during the ignition transient (Appendix B). Data from these instruments seemed to be good through the remainder of the flight.

Instrument losses in the nozzle area during descent due to thermal curtain break-up has limited the amount of nozzle splash down data that is available.

Due to the loss of much of the aft dome/nozzle instrumentation, adequate data is not available to determine splash down loads. Since this is a time period where adequate data was not obtained from the SRM Program, and previous RSRM flights have had similar losses, there is no existing data to verify these loads.

DFI needs to continue as long as there are areas that is not fully understood or there are loads that are not verified. If DFI is continued, a design change is required to better protect the sensors and cabling installed on the aft dome and nozzle.

5.0 DISCUSSION

5.1 Hardware Inspection

The TPS had minimal damage. There were 11 aft edge hits on the left RSRM and 10 hits on the right RSRM. The largest cork damaged area was on the left RSRM at station 539, 105°. There was a 4 by 6 inch piece of cork (see figure 1) that was torn away due to debris impact causing cohesive failure in the cork. There was no evidence of heat effect in the damaged area.

There was no evidence of unusual erosion or heat affect on any of the cork runs. However, the aft segments were heavily sooted. This is a result of severing the exit cone at apogee. Because the exit cone was shorter during a greater portion of the flight, there was substantially more heat in the aft skirt area. This caused the aft skirt foam to burn and many of the hydrazine lines to detonate adding to the heat and soot inside the aft skirt and on the aft segment.

The DFI cork just forward of the kick-ring joint had areas of missing or broken cork intermittently around the full circumference (see Figure 2). This is a typical condition that has been observed on past flights. This damage was attributed to air and water flowing through the joint at splash-down. In a few locations on this flight, there were soot deposits on the broken edge of the remaining cork. Because of the soot the Ice and Debris Team asked that a squawk be written. The squawk was submitted with non-concur signatures from both the Morton Thiokol and the MSFC Teams. Pieces of the cork were removed and examined. Looking at the back of the removed cork, a soot trail was evident leading from the joint interface to the were the cork was missing (see figure 3). Figure shows that the sooting only occurred on the forward edge of the damaged area. The clean aft edge indicates that the cork was not lost in flight. The Teams concluded that light sooting was present on past flights and that the heavier sooting on this flight was caused by an increased amount of soot trapped in the aft skirt at splash-down. However, with the Ice and Debris Teams insistence, a Problem Report was generated. Action was assigned to the KSC Malfunction Lab to determine when the soot was deposited. Results were inconclusive.

The Operational Pressure Transducers (OPTs) were inspected prior to and after removal from the motors. One OPT on the right hand motor was found to have some case damage (see figure 4). This damage was noted prior to removal from the motor. A D.R. search was accomplished. No past damage was indicated. When the damage occurred is not known. All other inspections were as expected. All transducers were tight with no evidence of any leakage, the connectors and wiring were all properly secured, and the ports were open.

The accelerometer and low pressure fairings were inspected and found to be in good condition and securely bonded to the motors. The accelerometer blocks were then hydrolased from the motors and disassembled. An internal inspection was performed noting that two accelerometers were not tight against their respective mounting blocks. These were both axial accelerometers and were located at station 1479.5, 0 degrees on the right RSRM and station 839.5, 0 degrees on the left RSRM. The data from these sensors appear to be okay, indicating that the sensors came loose after flight. During the hydrolase operation, the cork ramp on the front of the accelerometer is the first thing to break away from the motor. With the ramp missing, the hydrolaser can be sprayed directly into the fairing loosening the accelerometers.

Since the actual accelerometer is completely enclosed in a fairing, and the fairing was securely bonded to the motor, there is no debris concern associated with a loose accelerometer even if it occurs during flight.

Water impact damage on the aft dome was less than that observed on the past two flights. The instrumentation cables that are bonded to the aft dome have been torn completely off the motor in the past. On this flight the cables remained attached at both connectors. The loose part of at least one of the cables hung down around the nozzle opening causing the divers some problem when they tried to install the nozzle plugs. The divers were instructed that these cables could be cut if they are in the way in the future.

5.2 Measurement Performance

A list of instrumentation is contained in Appendix B, C and D. These tables include gage locations and observations made while reviewing the data.

5.2.1 DFI

The DFI on 360L003 consisted of 417 channels (appendix B) of instrumentation. Before launch, 28 gages were damaged or flagged as not functioning. These gages were waived. Of the remaining 389 gages, 375 (96.4%) performed properly.

Data spikes similar to those seen on 360L001 and 360L002 were also observed on 360L003. They occurred on girth gages on both right and left motors. The spikes were concentrated on the right motor, with a single spiking gage on the left forward segment. The spikes on both motors occurred at approximately .25 seconds.

Girth gages on the right RSRM, forward and center field joints exhibited an unexpected lag in the strain curve, in which the data showed no apparent strain for approximately .25 seconds. After .25 seconds the strain curves were as predicted. Spikes were not observed on gages that showed a data lag.

The cause of these girth gage data anomalies has not been determined, although the data spiking and lagging phenomena are probably related. Further study of the problem needs to be completed to determine why data spiking and lagging are seen on girth gages, and not on biaxial strain gages.

The igniter pressure transducers on both motors read low during the early part of the flight. This was the result of polytropic heating. This problem is explained in detail in TWR-15968.

Instrumentation installed in the nozzle/aft dome consisted of 16 girth gages and 52 strain gages. Of these, 45 gages were functioning during accent. However, 20 measurements were lost prior to splash down due to reentry loads and/or chute deployment.

Those losses are a result of the breakup of the thermal curtain, exposing the sensors and cables to excessive heating and aerodynamic loading. The sensors and cables either failed due to the heat or break due to aerodynamic loading and/or the shock of chute deployment.

Instrument losses in the nozzle area could be reduced by increasing thermal protection, and making the instruments more resistant to shock loading.

Measurement losses in the nozzle area on 360L001, 360L002, 360L003, as well as on the SRM Program has limited the amount of nozzle splash down data that is available. The loss of data has hampered model verification, and has made determining water impact loads difficult.

5.2.2 GEI

The GEI instrumentation on 360L003 consisted of 108 temperature sensors (appendix C), RTD's, which monitor motor case temperature while the motor is on the pad. Of the 108 GEI gages, 105 (97.2%) were functioning before launch. One gage was lost on each of the forward center segment. One gage on the right hand case-to-nozzle joint was reading low.

5.2.3 OFI

The OFI on 360L003 consisted of three Operational Pressure Transducers (OPT), (appendix D) per booster. These OPTs monitor motor chamber pressure during flight. These pressure transducers are used to initiate the SRB separation cue and give ballistic data to verify performance variation. All OFI pressure transducers functioned as expected.

APPENDIX A

Post Flight Evaluation Forms

Morton Thiokol Inc.
Space Operations

Table A-I

Instrumentation TPS Condition - Evaluation Checkoff Worksheet

Motor No.: STS-029	Date: 16 MAR 1989	Time:

Side: ☒ Left (A) ☐ Right (B)

Inspector(s): Bryan Baugh

Segment: ☒ Forward (FWD) ☐ Forward Center (FCS) ☐ Aft Center (ACS) ☐ Aft (AFT)

Component: TPS

TPS Condition			Comment Number
A. Charred/Heat Affected Material (HTAFF)?	___ yes	✓ no	
B. Missing Material > 1.67" X 1.67" (TPSVD)?	✓ yes	___ no	1, 2
C. Debris/Impact Damage (TPSDM)?	✓ yes	___ no	1
D. Unbonds (DEBND)?	___ yes	✓ no	

If any of these conditions exist, note:

Condition (Observation Code)	Starting Station Location (In.)	Ending Station Location (In.)	Starting Degree Location (Deg.)	Ending Degree Location (Deg.)	Circumferential Width (In.) (WIDTH)	Axial Length (In.) (LENGTH)	Radial Depth (In.) (DEPTH)
TPSDM	539		105		6	4	.5
TPSDM	611		105		2	.75	.25

Notes / Comments

1. AFT EDGE HITS.
2. Sheared off in base cork, wiring is exposed

Comment sheet(s) attached? ✓ yes ___ no

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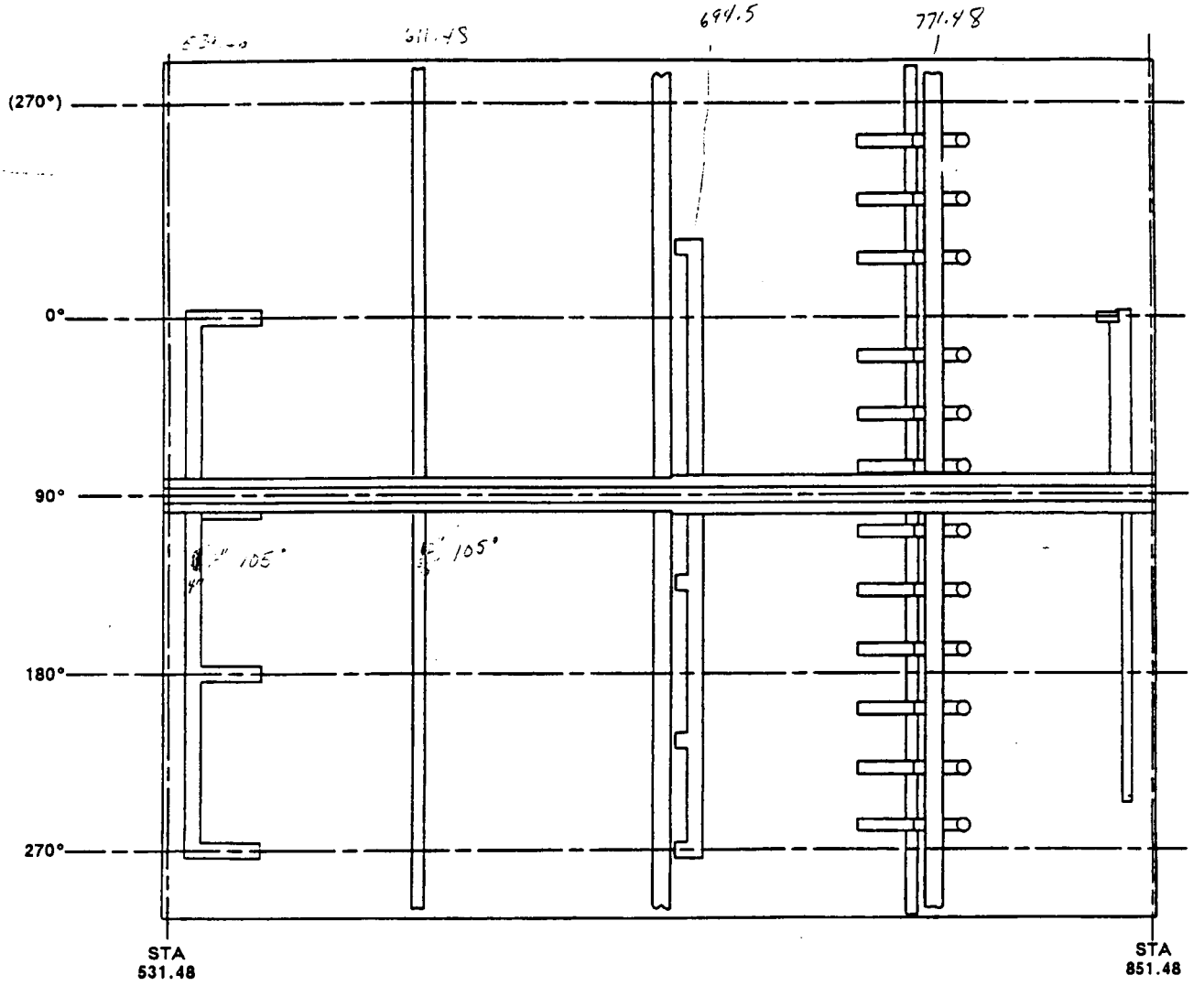
OF POOR QUALITY

Motor No.:	Date:	Time:
Side: Left (A)	Inspector(s):	
Segment: Forward (FWD)	Component: TPS	Corresponding Comment Number: ___



Observation Drawing Worksheet – L.H. Forward Segment TPS Layout
Figure A-1

Table A-I

Instrumentation TPS Condition – Evaluation Checkoff Worksheet

Motor No.: STS-029	Date: 16 Mar 1989	Time:

Side: ☒ Left (A) ☐ Right (B)

Inspector(s): Bryan Baugh

Segment: ☐ Forward (FWD) ☒ Forward Center (FCS) ☐ Aft Center (ACS) ☐ Aft (AFT)

Component: TPS

TPS Condition			Comment Number
A. Charred/Heat Affected Material (HTAFF)?	___ yes	✓ no	
B. Missing Material > 1.67" X 1.67" (TPSVD)?	___ yes	✓ no	
C. Debris/Impact Damage (TPSDM)?	✓ yes	___ no	1
D. Unbonds (DEBND)?	___ yes	✓ no	

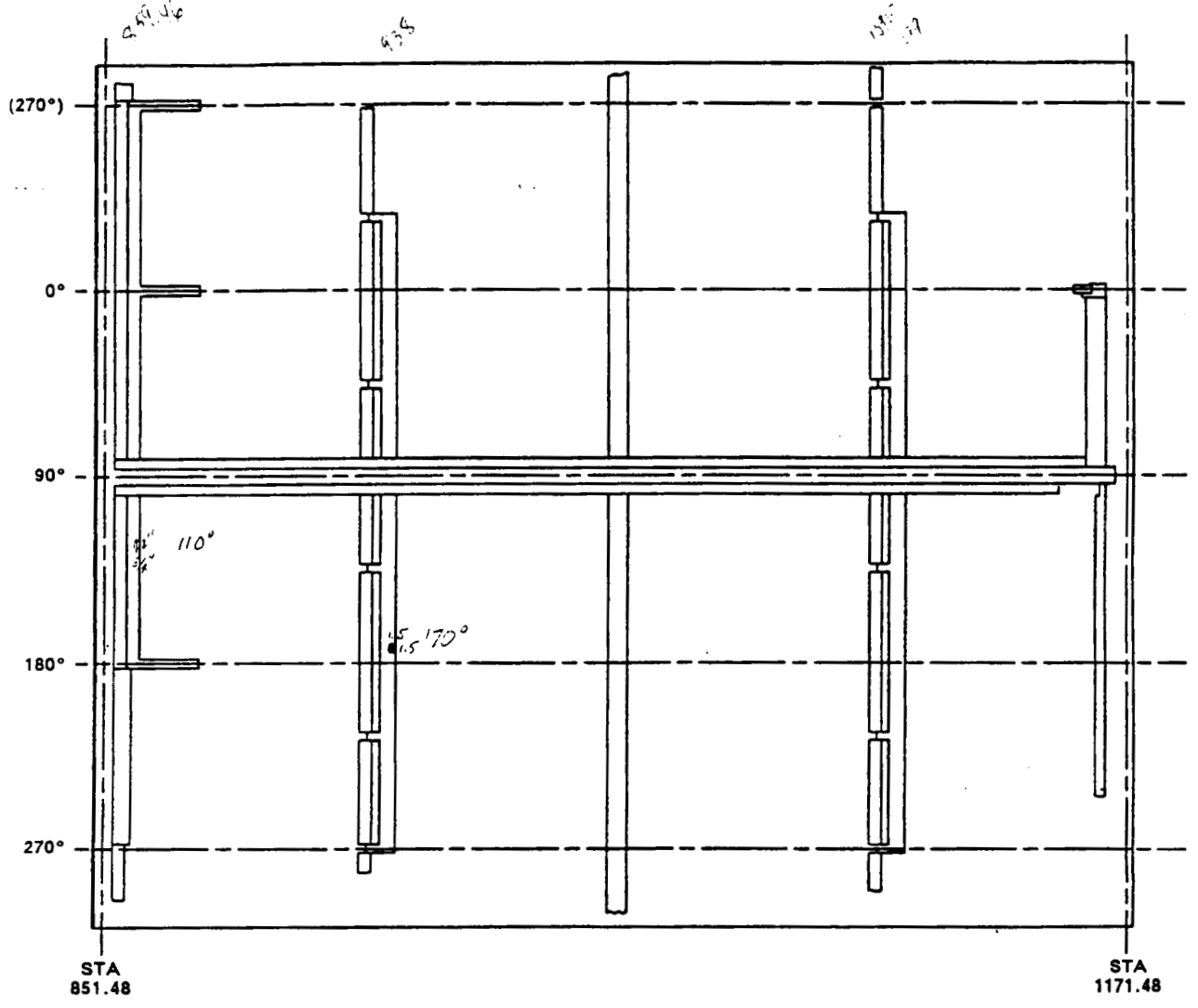
If any of these conditions exist, note:

Condition (Observation Code)	Starting Station Location (In.)	Ending Station Location (In.)	Starting Degree Location (Deg.)	Ending Degree Location (Deg.)	Circumferential Width (In.) (WIDTH)	Axial Length (In.) (LENGTH)	Radial Depth (In.) (DEPTH)
TPSDM	860		110		2	.75	.25
TPSDM	938		170		1.5	1.5	.25

Notes / Comments

Comment sheet(s) attached? ✓ yes ___ no

Motor No.:	Date:	Time:
Side: Left (A)	Inspector(s):	
Segment: Forward Center (FCS)	Component: TPS	Corresponding Comment Number: ___



Observation Drawing Worksheet – L.H. Forward Center Segment TPS Layout
Figure A-2

Table A-I

Instrumentation TPS Condition - Evaluation Checkoff Worksheet

Motor No.: STS-029	Date: 16 MAR 1989	Time:

Side: ☒ Left (A) ☐ Right (B)

Inspector(s): Bryan Baugh

Segment: ☐ Forward (FWD) ☐ Forward Center (FCS) ☒ Aft Center (ACS) ☐ Aft (AFT)

Component: TPS

TPS Condition			Comment Number
A. Charred/Heat Affected Material (HTAFF)?	___ yes	✓ no	
B. Missing Material > 1.67" X 1.67" (TPSVD)?	✓ yes	___ no	1
C. Debris/Impact Damage (TPSDM)?	✓ yes	___ no	1
D. Unbonds (DEBND)?	___ yes	✓ no	

If any of these conditions exist, note:

Condition (Observation Code)	Starting Station Location (In.)	Ending Station Location (In.)	Starting Degree Location (Deg.)	Ending Degree Location (Deg.)	Circumferential Width (In.) (WIDTH)	Axial Length (In.) (LENGTH)	Radial Depth (In.) (DEPTH)
TPSDM	1252		75		2.5	1.5	.25
TPSDM	1340		310		1.5	1.5	.25
TPSDM	1340		55		1.5	.5	.25
TPSDM	1340		130		1.75	1.	.25
TPSDM	1412		280		2	.5	.25

Notes / Comments

1. AFT EDGE HITS

Comment sheet(s) attached? ☒ yes ___ no

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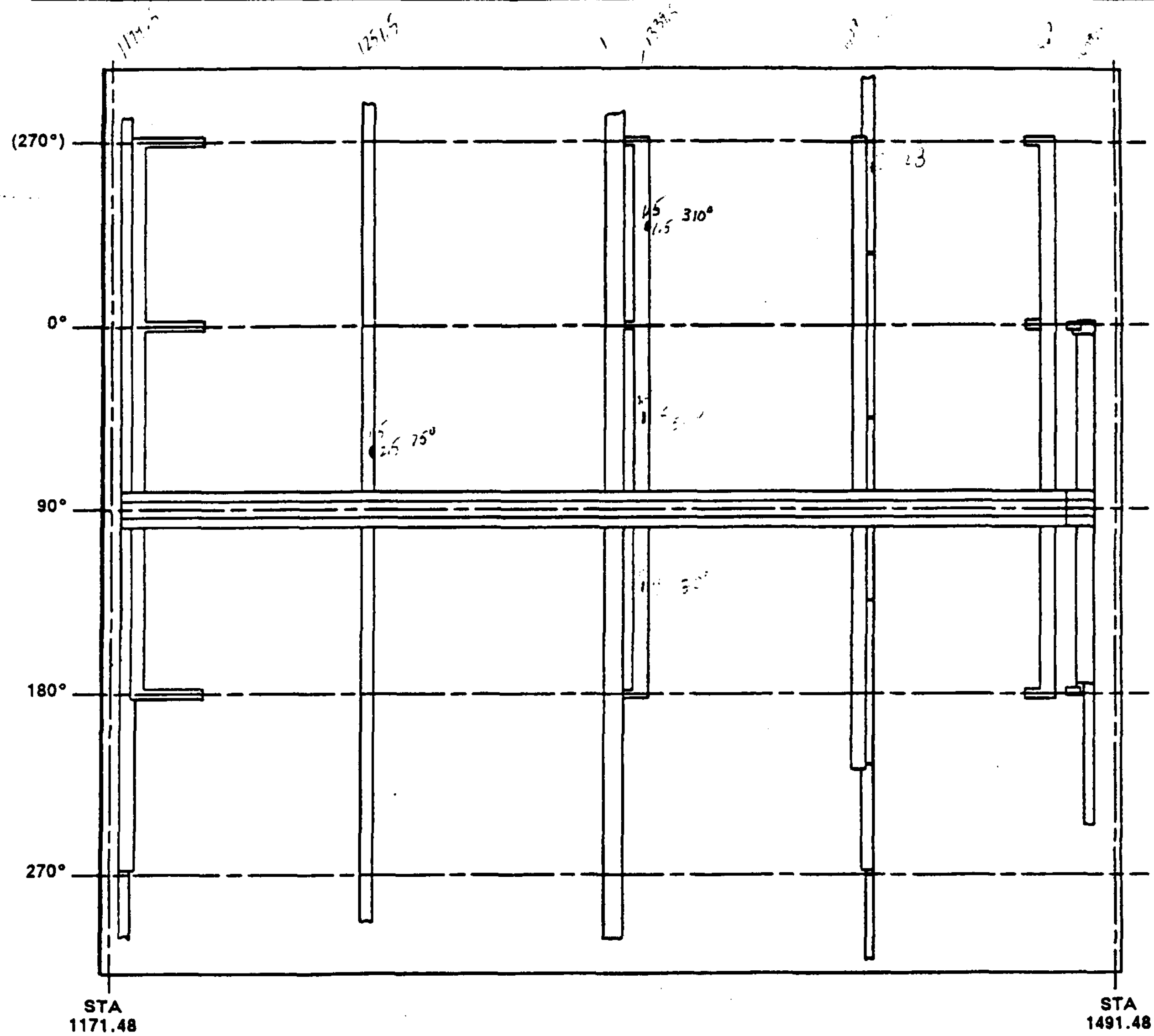
Motor No.:	Date:	Time:
Side: Left (A)	Inspector(s):	
Segment: Aft Center (ACS)	Component: TPS	Corresponding Comment Number: ___



Observation Drawing Worksheet - L.H. Aft Center Segment TPS Layout
Figure A-3

Morton Thiokol Inc.
Space Operations

Table A-I

Instrumentation TPS Condition - Evaluation Checkoff Worksheet

Motor No.: STS-029	Date: 16 MAR 1989	Time:

Side: ☒ Left (A) ☐ Right (B)

Inspector(s): Bryan Baugh

Segment: ☐ Forward (FWD) ☐ Forward Center (FCS) ☐ Aft Center (ACS) ☒ Aft (AFT)

Component: TPS

TPS Condition			Comment Number
A. Charred/Heat Affected Material (HTAFF)?	___ yes	✓ no	1
B. Missing Material > 1.67" X 1.67" (TPSVD)?	✓ yes	___ no	2
C. Debris/Impact Damage (TPSDM)?	✓ yes	___ no	3, 4
D. Unbonds (DEBND)?	___ yes	✓ no	

If any of these conditions exist, note:

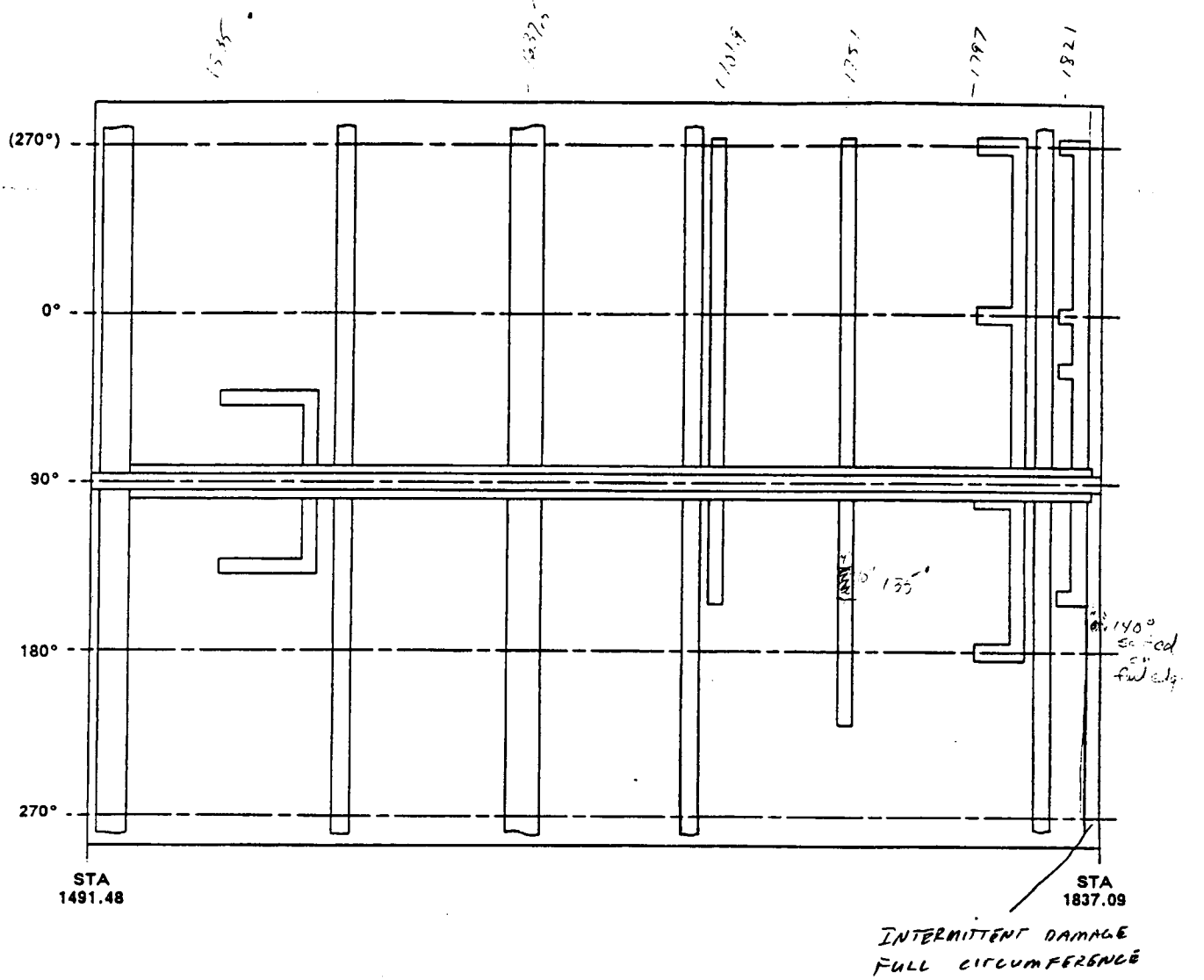
Condition (Observation Code)	Starting Station Location (In.)	Ending Station Location (In.)	Starting Degree Location (Deg.)	Ending Degree Location (Deg.)	Circumferential Width (In.) (WIDTH)	Axial Length (In.) (LENGTH)	Radial Depth (In.) (DEPTH)
TPSDM	1751		135		10	4	.125
(3) TPSDM	1833		140		2	2	.25

Notes / Comments

1. ENTIRE SEGMENT HEAVILY SOOTED.
2. AFT EDGE HITS
3. STA 1833 HAS 36 AREAS WERE CORK WAS BLOWN AWAY FROM THE AFT SKIRT JOINT. LOCATIONS ARE INTERMITTENTLY SPACED AROUND FULL CIRCUMFERENCE. SIZE RANGES FROM 1 IN CRACK TO 3X1 INCH.
4. LOCATION NOTED AT STA 1833, 140° HAS HEAVY SOOT ON FORWARD EDGE.

Comment sheet(s) attached? ✓ yes ___ no

Motor No.: 360L003	Date: 3/16/89	Time:
Side: Left (A)	Inspector(s): J. Alaw, B. Ethars	
Segment: Aft (AFT)	Component: TPS	Corresponding Comment Number: ___



Observation Drawing Worksheet – L.H. Aft Segment TPS Layout
Figure A-4

Morton Thiokol Inc.
Space Operations

Table A-I

Instrumentation TPS Condition - Evaluation Checkoff Worksheet

Motor No.: STS-029	Date: 16 MAR 1989	Time:

Side: ☐ Left (A) ☒ Right (B)

Inspector(s): Bryan Baugh

Segment: ☒ Forward (FWD) ☐ Forward Center (FCS) ☐ Aft Center (ACS) ☐ Aft (AFT)

Component: TPS

TPS Condition			Comment Number
A. Charred/Heat Affected Material (HTAFF)?	___ yes	✓ no	
B. Missing Material > 1.67" X 1.67" (TPSVD)?	___ yes	✓ no	
C. Debris/Impact Damage (TPSDM)?	✓ yes	___ no	1
D. Unbonds (DEBND)?	___ yes	✓ no	

If any of these conditions exist, note:

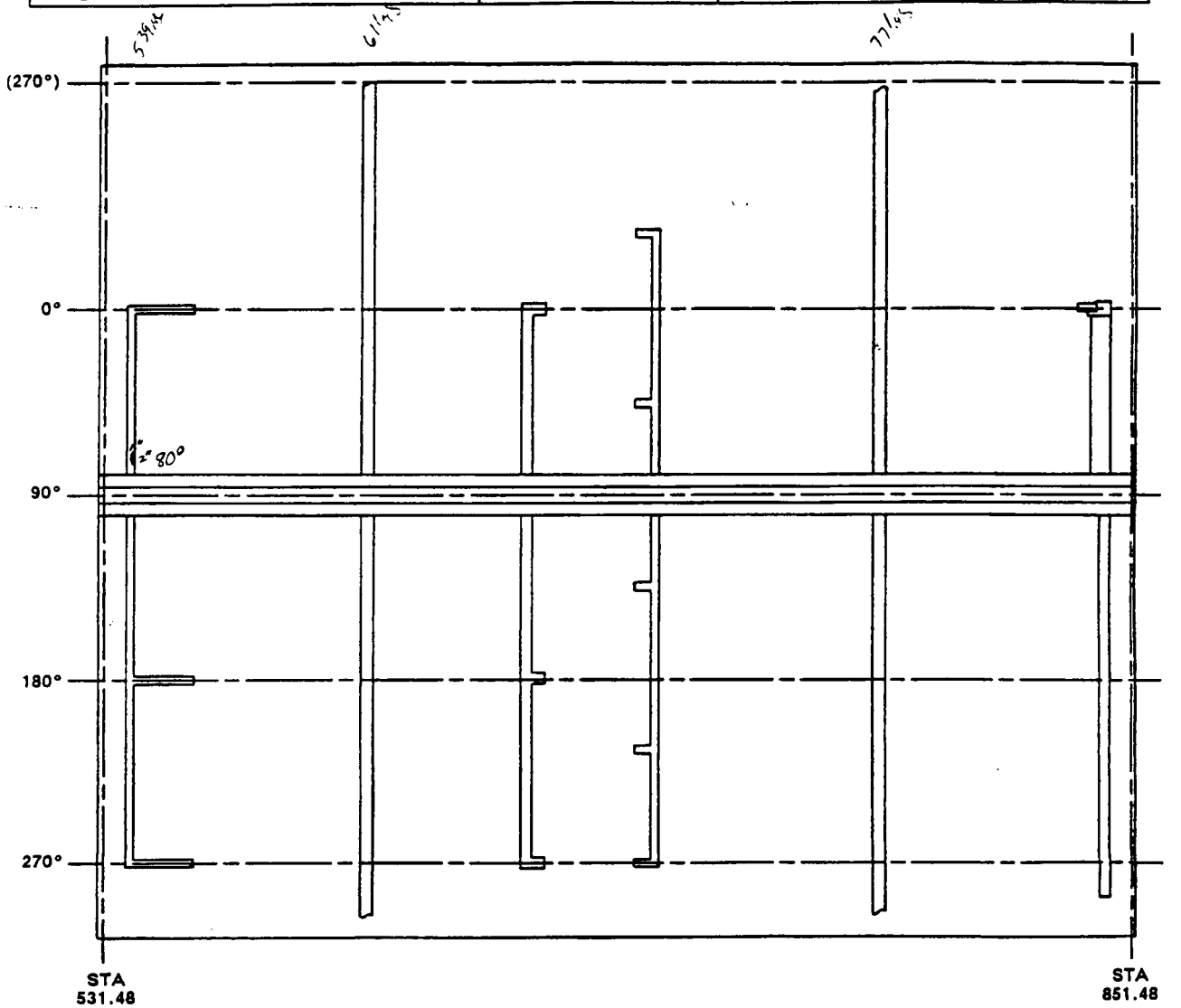
Condition (Observation Code)	Starting Station Location (In.)	Ending Station Location (In.)	Starting Degree Location (Deg.)	Ending Degree Location (Deg.)	Circumferential Width (In.) (WIDTH)	Axial Length (In.) (LENGTH)	Radial Depth (In.) (DEPTH)
TPSDM	540		80		2	1	.25

Notes / Comments

1, AFT EDGE HIT

Comment sheet(s) attached? ✓ yes ___ no

Motor No.: 360L003 R	**Date:** 5/16/89	**Time:**
Side: Right (B)	**Inspector(s):** T. Mau R. Butler	
Segment: Forward (FWD)	**Component:** TPS	**Corresponding Comment Number:** ___



Observation Drawing Worksheet – R.H. Forward Segment TPS Layout
Figure A-5

Table A-I

Instrumentation TPS Condition – Evaluation Checkoff Worksheet

Motor No.: STS-029	Date: 16 MAR 1989	Time:

Side: ☐ Left (A) ☒ Right (B)

Inspector(s): Bryan Baugh

Segment: ☐ Forward (FWD) ☒ Forward Center (FCS) ☐ Aft Center (ACS) ☐ Aft (AFT)

Component: TPS

TPS Condition			Comment Number
A. Charred/Heat Affected Material (HTAFF)?	___ yes	✓ no	
B. Missing Material > 1.67" X 1.67" (TPSVD)?	___ yes	✓ no	
C. Debris/Impact Damage (TPSDM)?	✓ yes	___ no	1
D. Unbonds (DEBND)?	___ yes	✓ no	

If any of these conditions exist, note:

Condition (Observation Code)	Starting Station Location (In.)	Ending Station Location (In.)	Starting Degree Location (Deg.)	Ending Degree Location (Deg.)	Circumferential Width (In.) (WIDTH)	Axial Length (In.) (LENGTH)	Radial Depth (In.) (DEPTH)
TPSDM	939		30		2	.5	.25

Notes / Comments

1 AFT EDGE HIT

Comment sheet(s) attached? X yes ___ no

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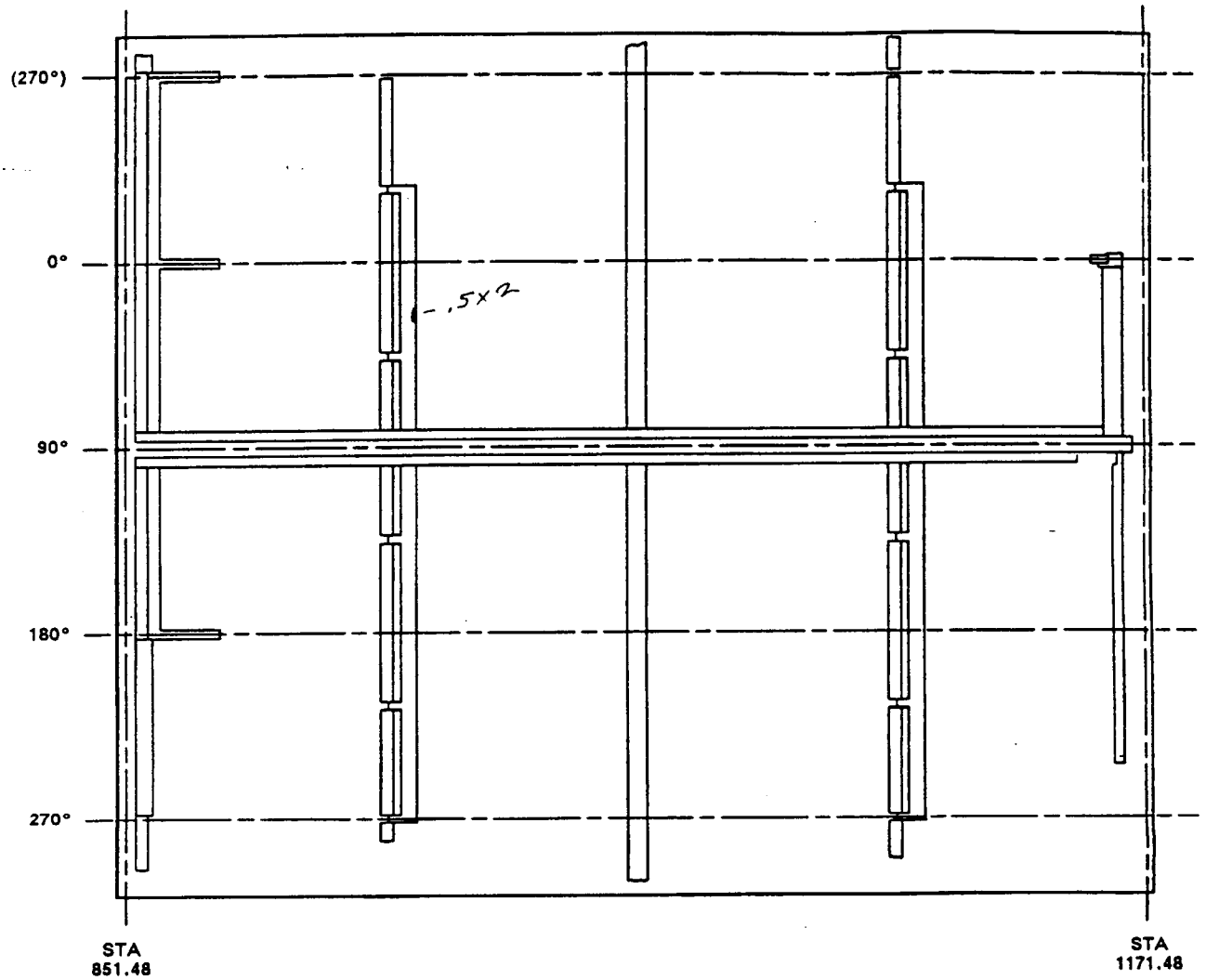
Motor No.: 360L003B	Date: 3/16/89	Time:
Side: Right (B)	Inspector(s): J. Maw, B. Buthers	
Segment: Forward Center (FCS)	Component: TPS	Corresponding Comment Number: ___



Observation Drawing Worksheet – R.H. Forward Center Segment TPS Layout
Figure A-6

Table A-I

Instrumentation TPS Condition - Evaluation Checkoff Worksheet

Motor No.: STS-029	Date: 16 MAR 1989	Time:

Side: ☐ Left (A) ☒ Right (B)

Inspector(s): Bryan Baugh

Segment: ☐ Forward (FWD) ☐ Forward Center (FCS) ☒ Aft Center (ACS) ☐ Aft (AFT)

Component: TPS

TPS Condition			Comment Number
A. Charred/Heat Affected Material (HTAFF)?	___ yes	✓ no	
B. Missing Material > 1.67" X 1.67" (TPSVD)?	___ yes	✓ no	
C. Debris/Impact Damage (TPSDM)?	✓ yes	___ no	1,
D. Unbonds (DEBND)?	___ yes	✓ no	

If any of these conditions exist, note:

Condition (Observation Code)	Starting Station Location (In.)	Ending Station Location (In.)	Starting Degree Location (Deg.)	Ending Degree Location (Deg.)	Circumferential Width (In.) (WIDTH)	Axial Length (In.) (LENGTH)	Radial Depth (In.) (DEPTH)
TPSDM	1178		215		2	1	.25
TPSDM	1178		185		1.5	1.5	.25
TPSDM	1180		100		1	1	.25
TPSDM	1252		30		1	.5	.25
TPSDM	1252		70		1	.5	.25
TPSDM	1252		290		1.5	.5	.25

Notes / Comments

1, AFT EDGE HITS

Comment sheet(s) attached? ___ yes ___ no

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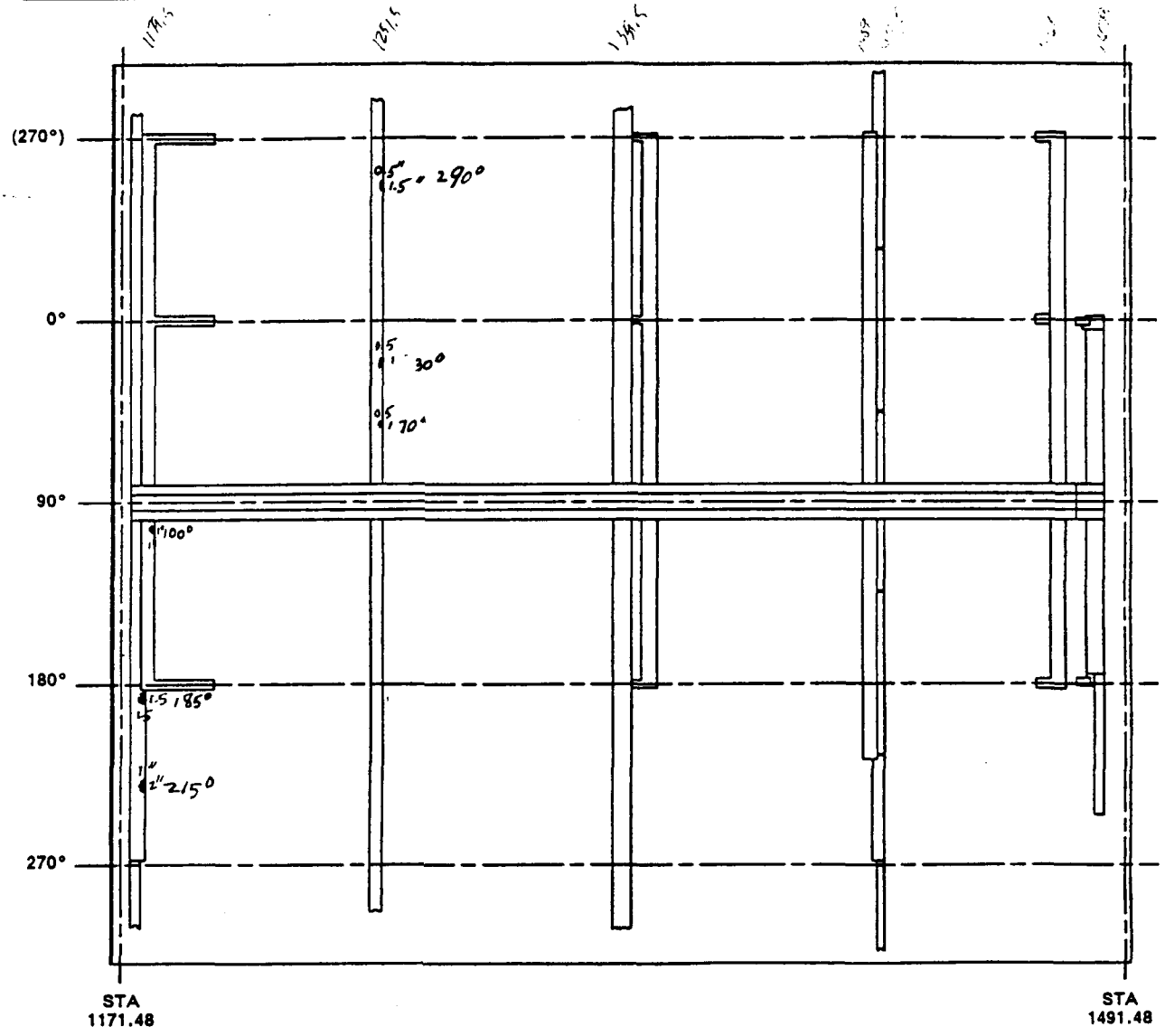
Motor No.: 360L003	Date: 8/16/89	Time:
Side: Right (B)	Inspector(s): J. Wow, B. Bates	
Segment: Aft Center (ACS)	Component: TPS	Corresponding Comment Number: ___



Observation Drawing Worksheet – R.H. Aft Center Segment TPS Layout
Figure A-7

Morton Thiokol Inc.
Space Operations

Table A-I

Instrumentation TPS Condition - Evaluation Checkoff Worksheet

Motor No.: STS-029	Date: 16 MAR 1989	Time:
Side: ☐ Left (A)	☒ Right (B)	
Inspector(s): Bryan Baugh		
Segment: ☐ Forward (FWD)	☐ Forward Center (FCS)	☐ Aft Center (ACS) ☒ Aft (AFT)
Component: TPS		

TPS Condition			Comment Number
A. Charred/Heat Affected Material (HTAFF)?	___ yes	✓ no	1
B. Missing Material > 1.67" X 1.67" (TPSVD)?	___ yes	✓ no	
C. Debris/Impact Damage (TPSDM)?	✓ yes	___ no	2, 3
D. Unbonds (DEBND)?	___ yes	✓ no	

If any of these conditions exist, note:

Condition (Observation Code)	Starting Station Location (In.)	Ending Station Location (In.)	Starting Degree Location (Deg.)	Ending Degree Location (Deg.)	Circumferential Width (In.) (WIDTH)	Axial Length (In.) (LENGTH)	Radial Depth (In.) (DEPTH)
TPSDM	1550		75		2	.5	.25
TPSDM	1550		80		1.5	.5	.25

Notes / Comments

1. ENTIRE SEGMENT HEAVILY SOOTED

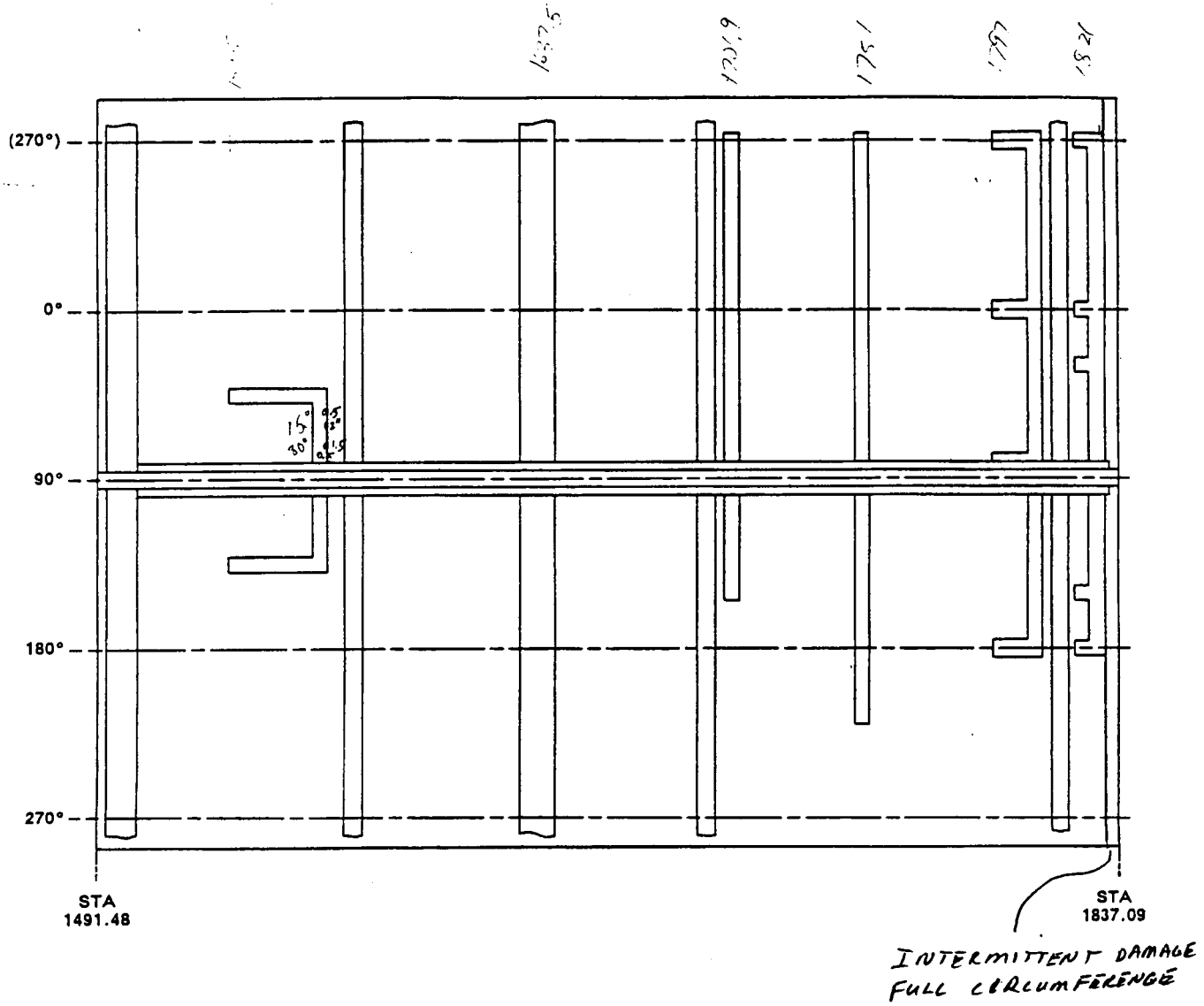
2 AFT EDGE HIT

3. STA 1833 HAS 32 AREAS WERE CORK WAS BLOWN AWAY FROM THE AFT SKIRT JOINT. LOCATIONS ARE INTERMITTENTLY SPACED AROUND FULL CIRCUMFERENCE. SIZE RANGES FROM a .5 crack TO 4 X 10 INCHES

Comment sheet(s) attached? ☒ yes ___ no

ORIGINAL PAGE IS
OF POOR QUALITY

Motor No.: 360L003	Date: 3/16/89	Time:
Side: Right (B)	Inspector(s): J. May B. Bates	
Segment: Aft (AFT)	Component: TPS	Corresponding Comment Number: ___



Observation Drawing Worksheet – R.H. Aft Segment TPS Layout
Figure A-8

Morton Thiokol Inc.
Space Operations

Table A-II

Pressure Transducer (OPTs) - Evaluation Checkoff Worksheet

Inspector(s): Bryan Baugh

Motor No.: STS-029 | Side: ☒ Left(A) ☐ Right(B) | Date: 15 Mar 1989

Inspection: ☒ Installed ☐ Removed | Component: Instrumentation

I. Evidence of Combustion Product Leakage (SOOT)?		
A. Transducer, 40° SN 68	___ yes	✓ no
B. Transducer, 180° 71	___ yes	✓ no
C. Transducer, 270° 73	___ yes	✓ no
D. Transducer, 115°	___ yes	NA no
II. Physical Damage (Nicks, Scratches, Gouges (DAMML))?		
A. Transducer, 40°	___ yes	✓ no
B. Transducer, 180°	___ yes	✓ no
C. Transducer, 270°	✓ yes	___ no
D. Transducer, 115°	NA yes	NA no
III. Loose Transducer (LOOSE)?		
A. Transducer, 40°	___ yes	✓ no
B. Transducer, 180°	___ yes	✓ no
C. Transducer, 270°	___ yes	✓ no
D. Transducer, 115°	___ yes	NA no
IV. Damaged Threads (DBOLT), after removal only?		
A. Transducer, 40°	___ yes	___ no
B. Transducer, 180°	___ yes	___ no
C. Transducer, 270°	___ yes	___ no
D. Transducer, 115°	___ yes	___ no
V. Plugged Port (PLGPT), after removal only?		
A. Transducer, 40°	___ yes	___ no
B. Transducer, 180°	___ yes	___ no
C. Transducer, 270°	___ yes	___ no
D. Transducer, 115°	___ yes	___ no

If yes, note the indicated data:

Condition (Observation Code)	Degree Start Location (Deg.)	Length (In.) (If applicable)
DAMML	290°	.10

Notes / Comments

SERIES OF HACK MARKS ON CENTER OF CASE ± .5 INCHES ABOVE BELL + HOWELL LOGO. WORST SCRATCH IS .1 LONG ± .01 DEEP

Morton Thiokol Inc.
Space Operations

Table A-II

Pressure Transducer (OPTs) – Evaluation Checkoff Worksheet

Inspector(s): Bryan Baugh		
Motor No.:	Side: ☒ Left(A) ☐ Right(B)	Date: 15 Mar 1989
Inspection: ☐ Installed ☒ Removed		Component: Instrumentation

I. Evidence of Combustion Product Leakage (SOOT)?		
A. Transducer, 40°	___ yes	✓ no
B. Transducer, 180°	___ yes	✓ no
C. Transducer, 270°	___ yes	✓ no
D. Transducer, 115°	N/A yes	N/A no
II. Physical Damage (Nicks, Scratches, Gouges (DAMML))?		
A. Transducer, 40°	___ yes	✓ no
B. Transducer, 180°	___ yes	✓ no
C. Transducer, 270°	✓ yes	___ no
D. Transducer, 115°	NA yes	NA no
III. Loose Transducer (LOOSE)? NA		
A. Transducer, 40°	___ yes	___ no
B. Transducer, 180°	___ yes	___ no
C. Transducer, 270°	___ yes	___ no
D. Transducer, 115°	___ yes	___ no
IV. Damaged Threads (DBOLT), after removal only?		
A. Transducer, 40°	___ yes	✓ no
B. Transducer, 180°	___ yes	✓ no
C. Transducer, 270°	___ yes	✓ no
D. Transducer, 115°	NA yes	NA no
V. Plugged Port (PLGPT), after removal only?		
A. Transducer, 40°	___ yes	✓ no
B. Transducer, 180°	___ yes	✓ no
C. Transducer, 270°	___ yes	✓ no
D. Transducer, 115°	NA yes	NA no

If yes, note the indicated data:

Condition (Observation Code)	Degree Start Location (Deg.)	Length (In.) (If applicable)

Notes / Comments

SEE INSTALLED CONDITION

Table A-II

Pressure Transducer (OPTs) - Evaluation Checkoff Worksheet

Inspector(s): BRYAN BAUGH		
Motor No.: STS-29	Side: ☐ Left(A) ☒ Right(B)	Date: 15 Mar 1989
Inspection: ☒ Installed	☐ Removed	Component: Instrumentation

I.	Evidence of Combustion Product Leakage (SOOT)?		
	A. Transducer, 40° S/N 9021	___ yes	✓ no
	B. Transducer, 180° 9221	___ yes	✓ no
	C. Transducer, 270° 137	___ yes	✓ no
	D. Transducer, 115° 1323	___ yes	✓ no
II.	Physical Damage (Nicks, Scratches, Gouges (DAMML))?		
	A. Transducer, 40°	___ yes	✓ no
	B. Transducer, 180°	___ yes	✓ no
	C. Transducer, 270°	___ yes	✓ no
	D. Transducer, 115°	___ yes	✓ no
III.	Loose Transducer (LOOSE)?		
	A. Transducer, 40°	___ yes	✓ no
	B. Transducer, 180°	___ yes	✓ no
	C. Transducer, 270°	___ yes	✓ no
	D. Transducer, 115°	___ yes	✓ no
IV.	Damaged Threads (DBOLT), after removal only?		
	A. Transducer, 40°	___ yes	___ no
	B. Transducer, 180°	___ yes	___ no
	C. Transducer, 270°	___ yes	___ no
	D. Transducer, 115°	___ yes	___ no
V.	Plugged Port (PLGPT), after removal only?		
	A. Transducer, 40°	___ yes	___ no
	B. Transducer, 180°	___ yes	___ no
	C. Transducer, 270°	___ yes	___ no
	D. Transducer, 115°	___ yes	___ no

If yes, note the indicated data:

Condition (Observation Code)	Degree Start Location (Deg.)	Length (In.) (If applicable)

Notes / Comments

Morton Thiokol Inc.
Space Operations

Table A-II

Pressure Transducer (OPTs) - Evaluation Checkoff Worksheet

Inspector(s): Bryan Baugh

Motor No.: STS-29 | Side: ☐ Left(A) ☒ Right(B) | Date: 15 Mar 1989

Inspection: ☐ Installed ☒ Removed | Component: Instrumentation

I.	Evidence of Combustion Product Leakage (SOOT)?		
	A. Transducer, 40°	____ yes	✓ no
	B. Transducer, 180°	____ yes	✓ no
	C. Transducer, 270°	____ yes	✓ no
	D. Transducer, 115°	____ yes	✓ no
II.	Physical Damage (Nicks, Scratches, Gouges (DAMML))?		
	A. Transducer, 40°	____ yes	✓ no
	B. Transducer, 180°	____ yes	✓ no
	C. Transducer, 270°	____ yes	✓ no
	D. Transducer, 115°	____ yes	✓ no
III.	Loose Transducer (LOOSE)? N/A		
	A. Transducer, 40°	____ yes	____ no
	B. Transducer, 180°	____ yes	____ no
	C. Transducer, 270°	____ yes	____ no
	D. Transducer, 115°	____ yes	____ no
IV.	Damaged Threads (DBOLT), after removal only?		
	A. Transducer, 40°	____ yes	✓ no
	B. Transducer, 180°	____ yes	✓ no
	C. Transducer, 270°	____ yes	✓ no
	D. Transducer, 115°	____ yes	✓ no
V.	Plugged Port (PLGPT), after removal only?		
	A. Transducer, 40°	____ yes	✓ no
	B. Transducer, 180°	____ yes	✓ no
	C. Transducer, 270°	____ yes	✓ no
	D. Transducer, 115°	____ yes	✓ no

If yes, note the indicated data:

Condition (Observation Code)	Degree Start Location (Deg.)	Length (In.) (If applicable)

Notes / Comments

Morton Thiokol Inc.
Space Operations

OBSERVATION CLARIFICATION FORM

Motor No. STS-029 Inspector(s) Bryan Baugh

☐ Left (A) ☒ Right (B) Date 18 Mar 89

Segment: ☐ Forward ☐ Forward Center ☒ Aft Center ☐ Aft ☐ Nozzle

Joint: _____ Component: Accelerometer

Location: Starting Station (In.) 1479.5 Ending Station (In.) _____

Starting Degree 0 Ending Degree _____

Size: Circumferential Width (In.) _____ Axial Length (In.) _____

Radial Distance (In.) _____

Description: Axial accelerometer is loose.
(Approximately 1 Thread)
Inspected after removal from the motor

Sketch observation below or attach worksheets and list below. Indicate orientation and dimensions. Show as much detail as necessary to explain the observation.

Figure A-9

Morton Thiokol Inc.
Space Operations

OBSERVATION CLARIFICATION FORM

Motor No. STS-029 Inspector(s) Bryan Baugh

☒ Left (A) ☐ Right (B) Date 18 Mar 89

Segment: ☒ Forward ☐ Forward Center ☐ Aft Center ☐ Aft ☐ Nozzle

Joint: _____ Component: Accelerometer

Location: Starting Station (In.) 839.5 Ending Station (In.) _____

Starting Degree 0 Ending Degree _____

Size: Circumferential Width (In.) _____ Axial Length (In.) _____

Radial Distance (In.) _____

Description: Axial accelerometer is loose.
(Approximately ½ thread)
Inspected after removal from the motor

Sketch observation below or attach worksheets and list below. Indicate orientation and dimensions. Show as much detail as necessary to explain the observation.

Figure A-9

Morton Thiokol Inc.
Space Operations

OBSERVATION CLARIFICATION FORM

Motor No. STS-029 Inspector(s) Bryan Baugh

☒ Left (A) ☒ Right (B) Date 17 Mar-89

Segment: ☐ Forward ☐ Forward Center ☐ Aft Center ☒ Aft ☐ Nozzle

Joint: _____ Component: DFI/GFI CABLES

Location: Starting Station (In.) _____ Ending Station (In.) _____

Starting Degree _____ Ending Degree _____

Size: Circumferential Width (In.) _____ Axial Length (In.) _____

Radial Distance (In.) _____

Description: CABLE BECAME UNBONDED FROM AFT DOME Cable is still attach at the rooster t.i.l. Divers reported some trouble installing nozzle plug because wires were across the end of the nozzle.

Sketch observation below or attach worksheets and list below. Indicate orientation and dimensions. Show as much detail as necessary to explain the observation.

Figure A-9

SRB/SRM POSTFLIGHT HARDWARE ASSESSMENT SQUAWK SHEET

Page of

2. DETECTED DURING	3. WORK AREA	4. SQUAWK ID NUMBER	4A. SRB SIDE
OPEN YIELDING	HANGAR AF	29-009	☐ LH ☒ RH

5. WORK UNIT CODE	6. PART NAME	7. PART NUMBER	8. SERIAL NUMBER	9. QUANTITY
AFT SEGMENT	AFT SKIRT/ AFT SEGMENT CORK CLOSEOUT	1U76646-01	1	

11. NHA/PN	12. STS NUMBER	13. REPORTED BY (NAME/ORG)		14. DATE/TIME	
10100-0050	STS 29R	RICHARD STEVENS	NASA	3/16/89	1600

15. PHOTOGRAPH ID NUMBER: 1094554 Thru -5

15A. PHOTO ORGANIZATION: ☐ USBI ☐ MTI ☐ OTHER _____

16. ITEM	17. PROBLEM DISCRIPTION
	DEI
	CORK CLOSEOUT AT THE AFT SKIRT FIELD JOINT
	AT THE FOLLOWING LOCATIONS IS MISSING. AREAS
	WHERE CORK IS MISSING SHOWS SIGNS OF SOOTING
	INDICATIVE OF CORK LOSS PRIOR TO SPLASH DOWN.
	DEGREE LOCATIONS: 0° 270° 275° 280° 330°
	340°, 350°. Note: Better degree approximations and dimensions appear to be Forward edges exhibit most severe sooting.
	356° (3 3/4" x 1 1/4"), 268° (4 3/4" x 2 5/8"), 278° (4 3/4" x 1 5/8"), 288° (5" x 2 1/4"),
	300° (2 1/4" x 1 1/4"), SQUAWK 315° (6" x 1 3/8"), 326° (4 1/4" x 1 1/2").
	NOTE. THIS ~~SKETCH~~ IS REQUESTED BY THE
	DEBRIS TEAM.

18. ASSESSMENT TEAM CONCURRENCE

NON CONCUR Bryan L Bey — CONTRACTOR ASSESSMENT ENGINEER

Nedra N. Hundley — MSFC ASSESSMENT ENGINEER

19. EXECUTIVE BOARD DISPOSITION: PR REQUIRED ☐ PR NOT REQUIRED ☐

20. PR NUMBER

21. REMARKS

22. APPROVALS

CONTRACTOR BOARD MEMBER/DATE

BOARD CHAIRMAN/DATE

SRB/SRM POSTFLIGHT HARDWARE ASSESSMENT SQUAWK SHEET

Page of

2. DETECTED DURING	3. WORK AREA	4. SQUAWK ID NUMBER	4A. SRB SIDE
OPEN VIEWING	HANGAR AF	29-008	☒ LH ☐ RH

5. WORK UNIT CODE	6. PART NAME	7. PART NUMBER	8. SERIAL NUMBER	9. QUANTITY
FT SEGMENT	AFT SKIRT/AFT SEGMENT CORK CLOSEOUT	1U76647-01	1	

10. NHA/PN	12. STS NUMBER	13. REPORTED BY (NAME/ORG)	14. DATE/TIME
0100-0050	STS 29R	RICHARD STEVENS / NASA	3/16/89 / 1600

15. PHOTOGRAPH ID NUMBER: 109449-02 (of 140° Location)

15A. PHOTO ORGANIZATION: ☐ USBI ☐ MTI ☐ OTHER _____

ITEM	17. PROBLEM DISCRIPTION
	CORK CLOSEOUT AT THE AFT SKIRT FIELD JOINT AT THE FOLLOWING LOCATIONS IS MISSING. AREAS WHERE CORK IS MISSING SHOWS SIGNS OF SOOTING INDICATIVE OF CORK LOSS PRIOR TO SPLASH DOWN.
	DEGREE LOCATIONS: 140°, 160°, 180°
	Respective dimensions are: ~~[illegible]~~ 2½"x2", 3"x1½", 3¾"x2¼"
	NOTE: THIS ~~SKUAWK~~ SQUAWK IS REQUESTED BY THE DEBRIS TEAM.

ASSESSMENT TEAM CONCURRENCE

I concur

Bryan L Boyce — CONTRACTOR ASSESSMENT ENGINEER

Nedra N. Hundley — MSFC ASSESSMENT ENGINEER

EXECUTIVE BOARD DISPOSITION

PR REQUIRED ☐ PR NOT REQUIRED ☐

20. PR NUMBER: -

REMARKS

APPROVALS

CONTRACTOR BOARD MEMBER/DATE

BOARD CHAIRMAN/DATE

ORIGINAL PAGE
BLACK AND WHITE PHOTOGRAPH

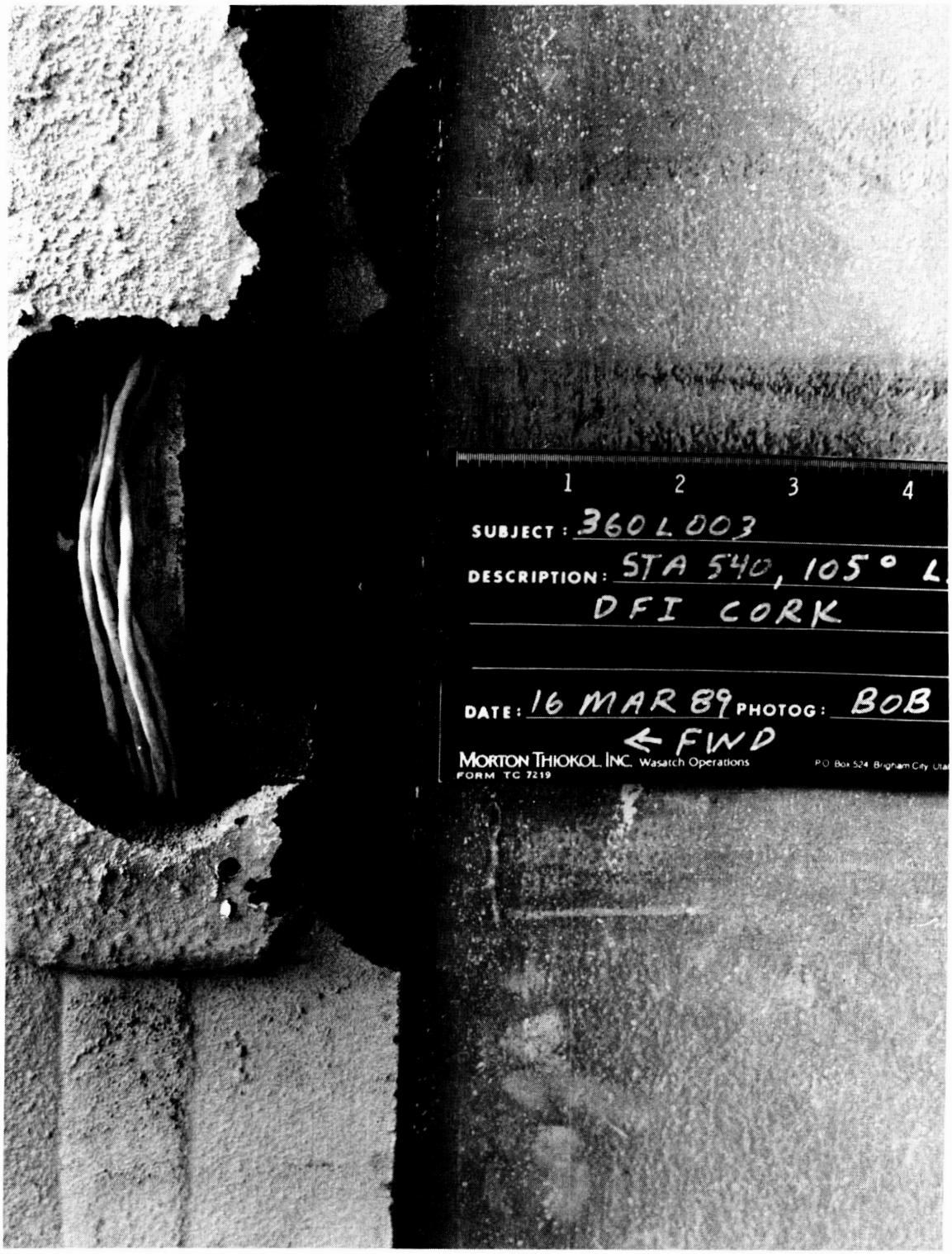


Figure 1

ORIGINAL PAGE
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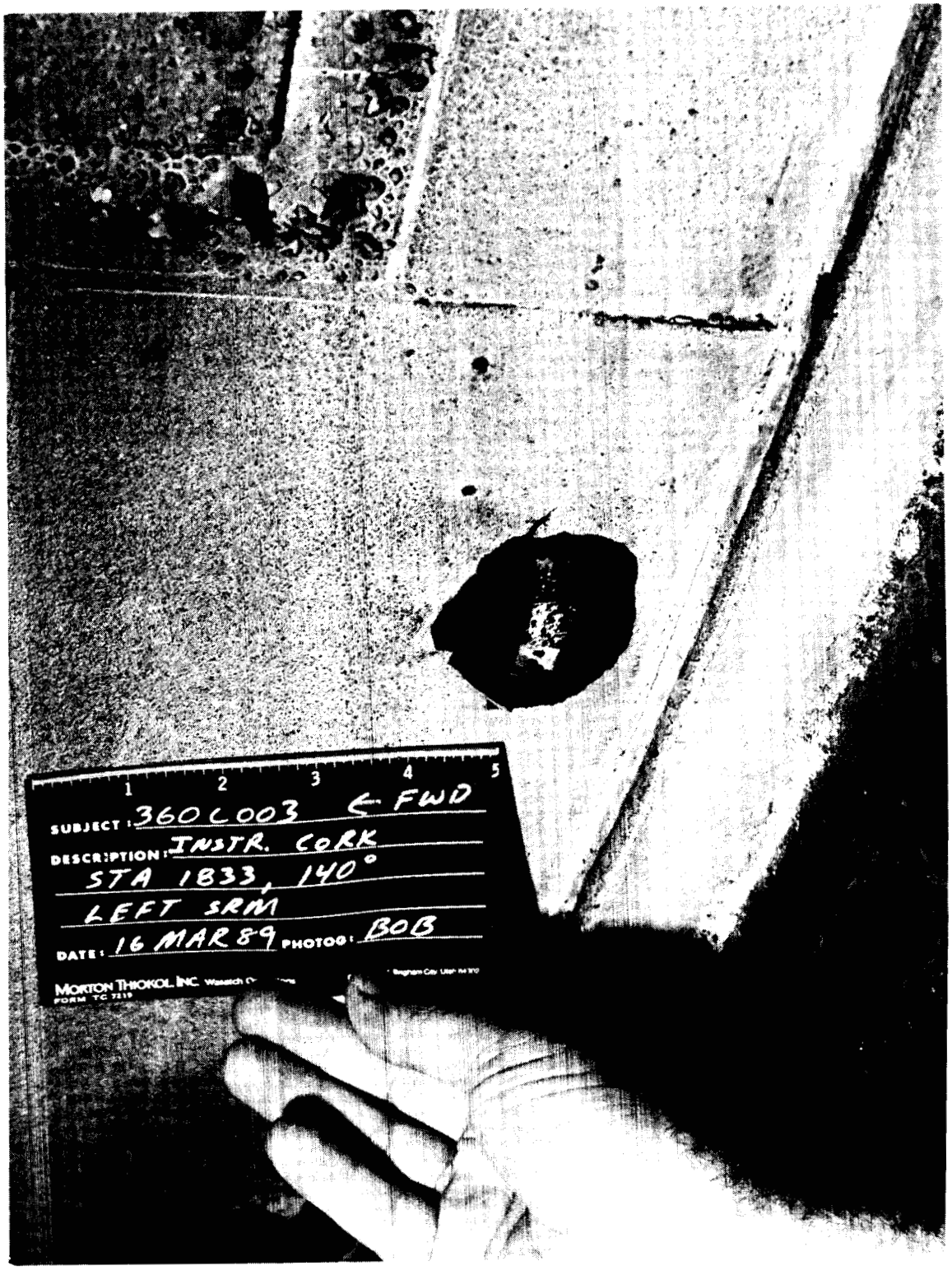

Figure 2

ORIGINAL PAGE
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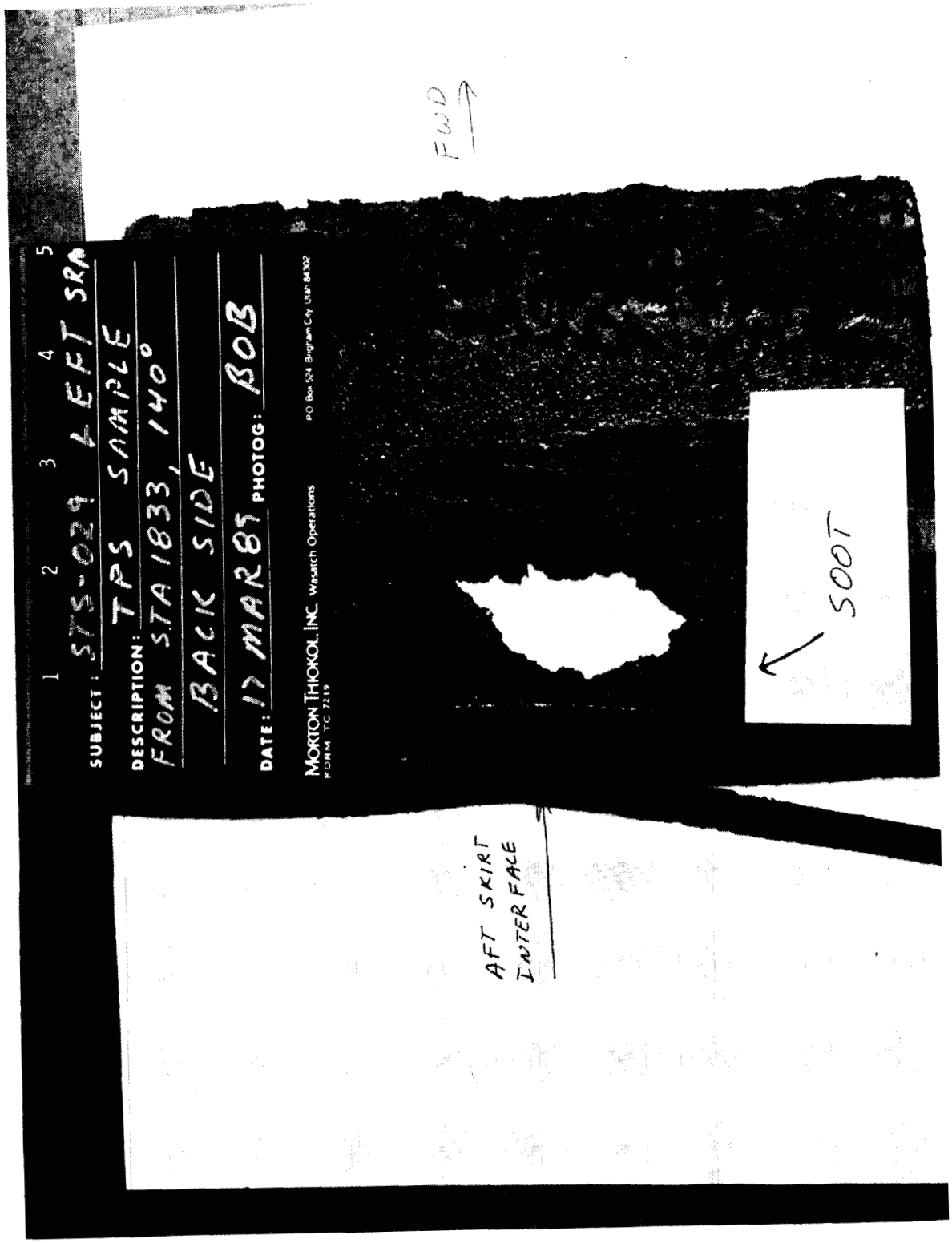

Figure 3

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Figure 4

APPENDIX B

DFI Instrumentation List

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
		LEFT RSRM						
B08D7160A	0.0	500.00	AXIAL	+/- 10 g's	VIB. SRB		USBI INSTALLED	
B08D7161A	0.0	500.00	TANG.	+/- 10 g's	VIB. SRB		USBI INSTALLED	
B08D7162A	0.0	500.00	RADIAL	+/- 10 g's	VIB. SRB		USBI INSTALLED	
B08D7164A	0.0	1159.50	AXIAL	+/- 10 g's	VIB. SRM		FWD CTR SEG	
B08D7165A	0.0	1159.50	TANG.	+/- 10 g's	VIB. SRM		FWD CTR SEG	
B08D7166A	0.0	1159.50	RADIAL	+/- 10 g's	VIB. SRM		FWD CTR SEG	
B08D7167A	0.0	1829.50	AXIAL	+/- 10 g's	VIB. SRM		AFT SEG	
B08D7168A	0.0	1829.50	TANG.	+/- 10 g's	VIB. SRM		AFT SEG	
B08D7169A	0.0	1829.50	RADIAL	+/- 10 g's	VIB. SRM		AFT SEG	
B08D7171A	85.0	1914.00	AXIAL	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D7172A	85.0	1914.00	TANG.	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D7173A	85.0	1914.00	RADIAL	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D7174A	270.0	1914.00	TANG.	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D7175A	0.0	839.50	AXIAL	+/- 10 g's	VIB. SRM		FWD SEG	
B08D7176A	0.0	839.50	TANG.	+/- 10 g's	VIB. SRM		FWD SEG	
B08D7177A	0.0	1479.50	AXIAL	+/- 10 g's	VIB. SRM		AFT CTR SEG	
B08D7178A	0.0	1479.50	TANG	+/- 10 g's	VIB. SRM		AFT CTR SEG	
B08D7179A	180.0	1479.50	TANG	+/- 10 g's	VIB. SRM		AFT CTR SEG	
B08G7259A	0.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7260A	0.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	LOST AT 270 SEC.
B08G7261A	270.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	SWITCHED WITH B08G7262A, DATA LOST CLIPPED
B08G7262A	270.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	SWITCHED WITH B08G7261A
B08G7263A	180.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7264A	180.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7265A	95.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	LOST AT 340 SEC.
B08G7266A	95.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7269A	N/A	611.48	HOOP	+6K,-2K	STRAIN, GIRTH		FWD SEG	SPIKE AT 320 AND 390 SEC.

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G7272A	N/A	771.48	HOOP	+6K,-2K	STRAIN, GIRTH		FWD SEG	DATA SPIKE AT .20 AND .26 SEC.
B08G7273A	N/A	846.78	HOOP	+6K,-2K	STRAIN, GIRTH	X	FWD SEG	
B08G7274A	N/A	848.53	HOOP	+6K,-2K	STRAIN, GIRTH	X	FWD SEG	
B08G7275A	N/A	850.17	HOOP	+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	GAGE LOST AT 370 SEC.
B08G7276A	N/A	852.58	HOOP	+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	
B08G7277A	N/A	855.03	HOOP	+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	
B08G7278A	N/A	857.28	HOOP	+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7279A	N/A	931.48	HOOP	+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	SPIKE AT 320 AND 370 SEC.
B08G7282A	N/A	1091.48	HOOP	+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	
B08G7283A	N/A	1166.78	HOOP	+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	
B08G7284A	N/A	1168.53	HOOP	+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7285A	N/A	1170.17	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	
B08G7286A	N/A	1172.58	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	SPIKE AT 320 AND 340 SEC.
B08G7287A	N/A	1175.03	HOOP	+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7288A	N/A	1177.28	HOOP	+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7289A	N/A	1251.48	HOOP	+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	
B08G7292A	N/A	1411.48	HOOP	+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7293A	N/A	1486.78	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	SPIKE AT 370 SEC.
B08G7294A	N/A	1488.53	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7295A	N/A	1490.17	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT SEG	GAGE LOST AT VAB, WAIVED
B08G7296A	N/A	1492.58	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT SEG	GAGE LOST AT VAB, WAIVED
B08G7297A	N/A	1495.03	HOOP	+6K,-2K	STRAIN, GIRTH		AFT SEG	
B08G7298A	N/A	1497.28	HOOP	+6K,-2K	STRAIN, GIRTH		AFT SEG	SPIKE AT 370 SEC.
B08G7301A	N/A	1637.48	HOOP	+6K,-2K	STRAIN, GIRTH		AFT SEG	
B08G7305A	N/A	1834.75	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT SEG	
B08G7306A	N/A	1836.20	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT SEG	
B08G7307A	N/A	1859.19	HOOP	+6K,-2K	STRAIN, GIRTH		AFT DOME	SPIKE AT .13 SEC.,LOST AT 300 SEC.
B08G7308A	N/A	1861.00	HOOP	+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	LOST AT 300 SEC.
B08G7310A	N/A	1875.65	HOOP	+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	LOST AT 300 SEC.
B08G7311A	N/A	1872.45	HOOP	+6K,-2K	STRAIN, GIRTH		AFT DOME	BAD, NOISY
B08G7312A	N/A	1872.95	HOOP	+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	BAD, NOISY
B08G7313A	N/A	1874.85	HOOP	+6K,-2K	STRAIN, GIRTH		AFT DOME	LOST AT 300 SEC.
B08G7314A	N/A	1875.65	HOOP	+6K,-2K	STRAIN, GIRTH		AFT DOME	LOST AT 300 SEC.

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G7315A	N/A	1876.25	HOOP	+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	LOST AT 300 SEC.
B08G7316A	5.0	486.40	AXIAL	+/-2K	STRAIN, BIAX		FWD DOME	
B08G7317A	5.0	486.40	TANG.	+6K,-2K	STRAIN, BIAX		FWD DOME	
B08G7318A	0.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G7319A	0.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G7320A	98.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	SPIKE AT 320 AND 370 SEC.
B08G7321A	98.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G7322A	180.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G7323A	180.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G7324A	270.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G7325A	270.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G7326A	0.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7327A	0.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7328A	98.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7329A	98.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7330A	180.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7331A	180.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7332A	270.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7333A	270.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7334A	0.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7335A	0.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	BAD, NOISY
B08G7336A	98.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7337A	98.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7338A	180.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7339A	180.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7340A	270.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	LOST AT 250 SEC.
B08G7341A	270.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	LOST AT 250 SEC.
B08G7342A	0.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7343A	0.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7344A	98.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7345A	98.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7346A	180.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G7347A	180.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7348A	270.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7349A	270.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7368A	180.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7369A	180.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7370A	98.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7371A	98.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7372A	0.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7373A	0.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7374A	320.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G7375A
B08G7375A	320.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G7374A
B08G7376A	300.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7377A	300.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7378A	285.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7379A	285.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7380A	270.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7381A	270.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7382A	255.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7383A	255.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7384A	220.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7385A	220.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7386A	180.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7387A	180.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7388A	98.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7389A	98.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7390A	0.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7391A	0.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7392A	320.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G7393A
B08G7393A	320.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G7392A
B08G7394A	300.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7395A	300.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	LOST AT 340 SEC.
B08G7396A	285.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	GAGE LOST AT VAB, WAIVED
B08G7397A	285.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G7398A	270.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7399A	270.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7400A	255.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	GAGE LOST AT VAB, WAIVED
B08G7401A	255.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G7400A
B08G7402A	220.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7403A	220.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7404A	0.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7405A	0.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	GAGE LOST AT VAB, WAIVED
B08G7406A	98.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7407A	98.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7408A	180.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7409A	180.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7410A	270.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7411A	270.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7412A	0.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	LOST AT 320 SEC.
B08G7413A	0.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	BAD, NOISY
B08G7415A	0.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G7416A	0.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	LOST AT 320 SEC.
B08G7417A	90.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G7418A	90.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	
B08G7420A	90.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G7421A	90.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	
B08G7422A	180.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G7423A	180.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	BAD, NOISY
B08G7425A	180.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G7426A	180.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	LOST AT 320 SEC.
B08G7427A	270.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G7428A	270.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	
B08G7430A	270.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G7431A	270.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	LOST AT 320 SEC.
B08G7432A	90.0	1849.00	AXIAL	+/-2K	STRAIN, BIAX		FLEX BEARING	LOST AT 320 SEC.
B08G7433A	90.0	1849.00	TANG.	+6K,-2K	STRAIN, BIAX		FLEX BEARING	LOST AT 320 SEC.
B08G7434A	90.0	1829.20	AXIAL	+/-2K	STRAIN, BIAX		NOSE ASSY	LOST AT 320 SEC.

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G7435A	90.0	1829.20	TANG.	+6K,-2K	STRAIN, BIAX		NOSE ASSY	
B08G7448A	90.0	1865.00	AXIAL	+/-2K	STRAIN, BIAX		FWD EXIT CONE	
B08G7449A	90.0	1865.00	TANG.	+6K,-2K	STRAIN, BIAX		FWD EXIT CONE	
B08G7450A	90.0	1834.00	AXIAL	+/-2K	STRAIN, BIAX		THROAT ASSY	GAGE LOST AT VAB, WAIVED
B08G7451A	90.0	1834.00	TANG.	+6K,-2K	STRAIN, BIAX		THROAT ASSY	
B08G7452A	90.0	1908.00	AXIAL	+/-2K	STRAIN, BIAX		EXIT CONE	
B08G7453A	90.0	1908.00	TANG.	+6K,-2K	STRAIN, BIAX		EXIT CONE	
B08G7460A	220.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	GAGE LOST IN FLIGHT
B08G7461A	220.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	GAGE LOST IN FLIGHT
B08G7462A	255.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7463A	255.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7464A	285.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	GAGE LOST AT VAB, WAIVED
B08G7465A	285.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7466A	320.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7467A	320.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	GAGE LOST IN FLIGHT
B07P7390A	349.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7391A	319.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7392A	289.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7393A	259.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7394A	229.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7395A	199.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7396A	169.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7397A	139.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7398A	109.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7399A	79.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	GAGE LOST IN FLIGHT
B07P7400A	49.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7401A	19.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07T7606A	205.0	486.40		0-400 deg	TEMP, SRM		FWD DOME	
B07T7607A	0.0	846.30		0-400 deg	TEMP. SRM	X	FWD SEG	
B07T7608A	120.0	846.30		0-400 deg	TEMP. SRM	X	FWD SEG	
B07T7609A	240.0	846.30		0-400 deg	TEMP. SRM	X	FWD SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B07T7610A	0.0	1486.30		0-400 deg	TEMP. SRM	X	AFT CTR SEG	
B07T7611A	120.0	1486.30		0-400 deg	TEMP. SRM	X	AFT CTR SEG	
B07T7612A	240.0	1486.30		0-400 deg	TEMP. SRM	X	AFT CTR SEG	
B07T7613A	0.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T7614A	90.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T7615A	180.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T7616A	270.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T7617A	0.0	1828.10		0-400 deg	TEMP. SRM		NOSE ASSY	
B07T7618A	180.0	1828.10		-50 TO 750	TEMP. SRM		NOSE ASSY	
B07T7619A	0.0	1905.00		-50 TO 750	TEMP. SRM		EXIT CONE	
B07T7620A	90.0	1845.00		-50 TO 750	TEMP. SRM		THROAT ASSY	
B07T7621A	270.0	1845.00		-50 TO 750	TEMP. SRM		THROAT ASSY	GAGE LOST AT VAB, WAIVED
B07T7622A	180.0	1905.00		-50 TO 750	TEMP. SRM		EXIT CONE	
B07T7623A	0.0	1996.50		-50 TO 750	TEMP. SRM		EXIT CONE	
B07T7624A	120.0	1996.50		-50 TO 750	TEMP. SRM		EXIT CONE	
B07T7625A	240.0	1996.50		-50 TO 750	TEMP. SRM		EXIT CONE	
B47P1300A	40.0	487.00		0-1000 psia	OPT		IGNITER	
B47P1301A	180.0	487.00		0-1000 psia	OPT		IGNITER	
B47P1302A	270.0	487.00		0-1000 psia	OPT		IGNITER	BAD, NOISY
B47P7310A	115.0	487.00		0-3000 psia	PRESSURE, IGNITER CHAMBE		IGNITER	
		RIGHT RSRM						
B08D8151A	180.0	487.00	AXIAL	+/-400 g's	VIB. SRM		FWD DOME	
B08D8152A	180.0	487.00	RADIAL	+/-400 g's	VIB. SRM		FWD DOME	
B08D8153A	180.0	487.00	TANG	+/-400 g's	VIB. SRM		FWD DOME	
B08D8160A	0.0	500.00	AXIAL	+/- 10 g's	VIB. SRB		USBI INSTALLED	
B08D8161A	0.0	500.00	TANG.	+/- 10 g's	VIB. SRB		USBI INSTALLED	
B08D8163A	180.0	500.00	TANG.	+/- 10 g's	VIB. SRB		USBI INSTALLED	
B08D8164A	0.0	1159.50	AXIAL	+/- 10 g's	VIB. SRM		FWD CTR SEG	
B08D8165A	0.0	1159.50	TANG.	+/- 10 g's	VIB. SRM		FWD CTR SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08D8166A	0.0	1159.50	RADIAL	+/- 10 g's	VIB. SRM		FWD CTR SEG	
B08D8167A	0.0	1829.50	AXIAL	+/- 10 g's	VIB. SRM		AFT SEG	
B08D8168A	0.0	1829.50	TANG.	+/- 10 g's	VIB. SRM		AFT SEG	
B08D8170A	180.0	1829.50	RADIAL	+/- 10 g's	VIB. SRM		AFT SEG	
B08D8171A	85.0	1914.00	AXIAL	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D8172A	85.0	1914.00	TANG.	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D8173A	85.0	1914.00	RADIAL	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D8174A	270.0	1914.00	TANG.	+/- 10 g's	VIB. SRM		EXIT CONE	GAGE LOST AT VAB, WAIVED
B08D8175A	0.0	839.50	AXIAL	+/- 10 g's	VIB. SRM		FWD SEG	
B08D8176A	0.0	839.50	TANG.	+/- 10 g's	VIB. SRM		FWD SEG	
B08D8177A	0.0	1479.50	AXIAL	+/- 10 g's	VIB. SRM		AFT CTR SEG	
B08D8178A	0.0	1479.50	TANG.	+/- 10 g's	VIB. SRM		AFT CTR SEG	
B08D8179A	180.0	1479.50	TANG.	+/- 10 g's	VIB. SRM		AFT CTR SEG	
B08G8251A	0.0	670.00	AXIAL	+/-2K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8252A	0.0	670.00	TANG.	-2K/+6K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8253A	85.0	670.00	AXIAL	+/-2K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8254A	85.0	670.00	TANG.	-2K/+6K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8255A	180.0	670.00	AXIAL	+/-2K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8256A	180.0	670.00	TANG.	-2K/+6K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8257A	270.0	670.00	AXIAL	+/-2K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8258A	270.0	670.00	TANG.	-2K/+6K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8259A	180.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8260A	180.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8261A	270.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G8262A	270.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8263A	0.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8264A	0.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8265A	85.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8266A	85.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8269A	N/A	611.48		+6K,-2K	STRAIN, GIRTH		FWD SEG	
B08G8272A	N/A	771.48		+6K,-2K	STRAIN, GIRTH		FWD SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G8273A	N/A	846.78		+6K,-2K	STRAIN, GIRTH	X	FWD SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8274A	N/A	848.53		+6K,-2K	STRAIN, GIRTH	X	FWD SEG	GAGE LOST AT VAB, WAIVED
B08G8275A	N/A	850.17		+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8276A	N/A	852.58		+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8277A	N/A	855.03		+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8278A	N/A	857.28		+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	GAGE LOST AT VAB, WAIVED
B08G8279A	N/A	931.48		+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	SPIKE AT .21 SEC.
B08G8282A	N/A	1091.48		+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	SPIKE AT .21 SEC.
B08G8283A	N/A	1166.78		+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8284A	N/A	1168.53		+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	GAGE LOST AT VAB, WAIVED
B08G8285A	N/A	1170.17		+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8286A	N/A	1172.58		+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8287A	N/A	1175.03		+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	SPIKE AT .25 SEC.
B08G8288A	N/A	1177.28		+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	SPIKE AT .25 SEC.
B08G8289A	N/A	1251.48		+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	SPIKE AT .30 SEC.
B08G8292A	N/A	1411.48		+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	
B08G8293A	N/A	1486.78		+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G8294A	N/A	1488.53		+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G8295A	N/A	1490.17		+6K,-2K	STRAIN, GIRTH	X	AFT SEG	SPIKE AT .30 SEC.
B08G8296A	N/A	1492.58		+6K,-2K	STRAIN, GIRTH	X	AFT SEG	SPIKE AT .30 SEC.
B08G8297A	N/A	1495.03		+6K,-2K	STRAIN, GIRTH		AFT SEG	SPIKE AT .30 SEC.
B08G8298A	N/A	1497.28		+6K,-2K	STRAIN, GIRTH		AFT SEG	SPIKE AT .30 SEC.
B08G8301A	N/A	1637.48		+6K,-2K	STRAIN, GIRTH		AFT SEG	SPIKE AT .30 SEC.
B08G8305A	N/A	1834.75		+6K,-2K	STRAIN, GIRTH	X	AFT SEG	GAGE LOST AT VAB, WAIVED
B08G8306A	N/A	1836.20		+6K,-2K	STRAIN, GIRTH	X	AFT SEG	GAGE LOST AT VAB, WAIVED
B08G8307A	N/A	1859.19		+6K,-2K	STRAIN, GIRTH		AFT DOME	LOST AT 300 SEC.
B08G8308A	N/A	1861.00		+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	BAD, NOISY
B08G8310A	N/A	1875.65		+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	LOST AT 300 SEC.
B08G8311A	N/A	1872.45		+6K,-2K	STRAIN, GIRTH		AFT DOME	LOST AT 300 SEC.
B08G8312A	N/A	1872.95		+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	LOST AT 300 SEC.
B08G8313A	N/A	1874.85		+6K,-2K	STRAIN, GIRTH		AFT DOME	
B08G8314A	N/A	1875.65		+6K,-2K	STRAIN, GIRTH		AFT DOME	LOST AT 300 SEC.
B08G8315A	N/A	1876.25		+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	LOST AT 300 SEC.

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G8316A	185.0	486.40	AXIAL	+/-2K	STRAIN, BIAX		FWD DOME	
B08G8317A	185.0	486.40	TANG.	+6K,-2K	STRAIN, BIAX		FWD DOME	
B08G8318A	180.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G8319A	180.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G8320A	82.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G8321A	82.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G8322A	0.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G8323A	0.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G8324A	270.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G8325A	270.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G8326A	180.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8327A	180.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8328A	82.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8329A	82.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8330A	0.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8331A	0.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8332A	270.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8333A	270.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8334A	180.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8335A	180.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8336A	82.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8337A	82.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8338A	0.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8339A	0.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8340A	270.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8341A	270.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8342A	180.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8343A	180.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8344A	82.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8345A	82.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8346A	0.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8347A	0.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G8348A	270.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8349A	270.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8368A	0.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8369A	0.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8370A	82.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8371A	82.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8372A	180.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8373A	180.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8374A	220.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8375A	220.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8376A	240.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8377A	240.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8378A	255.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8379A	255.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8380A	270.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8381A	270.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8382A	285.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8383A	285.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8384A	320.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8385A	320.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8386A	0.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8387A	0.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8388A	82.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8389A	82.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8390A	180.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8391A	180.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8392A	220.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8393A	220.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8394A	240.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8395A	240.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8396A	255.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8397A	255.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8398A	270.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G8399A	270.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8400A	285.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8401A	285.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8402A	320.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8403A	320.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8404A	180.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8405A	180.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8406A	82.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8407A	82.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8408A	0.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8409A	0.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8410A	270.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8411A	270.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8412A	180.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8413A	180.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8415A	180.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G8416A	180.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	
B08G8417A	90.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8418A	90.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8420A	90.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G8421A	90.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	BAD, NOISY
B08G8422A	0.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8423A	0.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8425A	0.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G8426A	0.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	
B08G8427A	270.0	1871.00	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8428A	270.0	1871.00	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8430A	270.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G8431A	270.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	LOST AT 310 SEC.
B08G8432A	90.0	1849.00	AXIAL	+/-2K	STRAIN, BIAX		FLEX BEARING	
B08G8433A	90.0	1849.00	TANG.	+6K,-2K	STRAIN, BIAX		FLEX BEARING	
B08G8434A	90.0	1829.20	AXIAL	+/-2K	STRAIN, BIAX		NOSE ASSY	
B08G8435A	90.0	1829.20	TANG.	+6K,-2K	STRAIN, BIAX		NOSE ASSY	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G8448A	90.0	1865.00	AXIAL	+/-2K	STRAIN, BIAX		FWD EXIT CONE	
B08G8449A	90.0	1865.00	TANG.	+6K,-2K	STRAIN, BIAX		FWD EXIT CONE	
B08G8450A	90.0	1834.00	AXIAL	+/-2K	STRAIN, BIAX		THROAT ASSY	
B08G8451A	90.0	1834.00	TANG.	+6K,-2K	STRAIN, BIAX		THROAT ASSY	
B08G8452A	90.0	1908.00	AXIAL	+/-2K	STRAIN, BIAX		EXIT CONE	
B08G8453A	90.0	1908.00	TANG.	+6K,-2K	STRAIN, BIAX		EXIT CONE	
B08G8460A	320.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8461A	320.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8462A	285.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G8463A, DATA LOST CLIPPED
B08G8463A	285.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G8462A
B08G8464A	255.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8465A	255.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8466A	220.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8467A	220.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B07T8606A	205.0	486.40		0-400 deg	TEMP, SRM		FWD DOME	
B07T8607A	180.0	846.30		0-400 deg	TEMP. SRM	X	FWD SEG	BAD, DATA DROPOUT
B07T8608A	60.0	846.30		0-400 deg	TEMP. SRM	X	FWD SEG	
B07T8609A	300.0	846.30		0-400 deg	TEMP. SRM	X	FWD SEG	
B07T8610A	180.0	1486.30		0-400 deg	TEMP. SRM	X	AFT CTR SEG	
B07T8611A	60.0	1486.30		0-400 deg	TEMP. SRM	X	AFT CTR SEG	
B07T8612A	300.0	1486.30		0-400 deg	TEMP. SRM	X	AFT CTR SEG	
B07T8613A	180.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T8614A	90.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T8615A	0.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T8616A	270.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T8617A	180.0	1828.10		0-400 deg	TEMP. SRM		NOSE ASSY	
B07T8618A	0.0	1828.10		-50 to 750	TEMP. SRM		NOSE ASSY	
B07T8619A	180.0	1905.00		-50 to 750	TEMP. SRM		EXIT CONE	
B07T8620A	90.0	1845.00		-50 to 750	TEMP. SRM		THROAT ASSY	
B07T8621A	270.0	1845.00		-50 to 750	TEMP. SRM		THROAT ASSY	
B07T8622A	0.0	1905.00		-50 to 750	TEMP. SRM		EXIT CONE	
B07T8623A	180.0	1996.50		-50 to 750	TEMP. SRM		EXIT CONE	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B07T8624A	60.0	1996.50		-50 to 750	TEMP. SRM		EXIT CONE	
B07T8625A	300.0	1996.50		-50 to 750	TEMP. SRM		EXIT CONE	
B47P2300A	40.0	487.00		0-1000 psia	OPT		IGNITER	
B47P2301A	180.0	487.00		0-1000 psia	OPT		IGNITER	BAD, NOISY
B47P2302A	270.0	487.00		0-1000 psia	OPT		IGNITER	
B47P8310A	115.0	487.00		0-3000 psia	PRESSURE, IGNITER CHAMBE		IGNITER	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
		LEFT RSRM						
B08D7160A	0.0	500.00	AXIAL	+/- 10 g's	VIB. SRB		USBI INSTALLED	
B08D7161A	0.0	500.00	TANG.	+/- 10 g's	VIB. SRB		USBI INSTALLED	
B08D7162A	0.0	500.00	RADIAL	+/- 10 g's	VIB. SRB		USBI INSTALLED	
B08D7164A	0.0	1159.50	AXIAL	+/- 10 g's	VIB. SRM		FWD CTR SEG	
B08D7165A	0.0	1159.50	TANG.	+/- 10 g's	VIB. SRM		FWD CTR SEG	
B08D7166A	0.0	1159.50	RADIAL	+/- 10 g's	VIB. SRM		FWD CTR SEG	
B08D7167A	0.0	1829.50	AXIAL	+/- 10 g's	VIB. SRM		AFT SEG	
B08D7168A	0.0	1829.50	TANG.	+/- 10 g's	VIB. SRM		AFT SEG	
B08D7169A	0.0	1829.50	RADIAL	+/- 10 g's	VIB. SRM		AFT SEG	
B08D7171A	85.0	1914.00	AXIAL	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D7172A	85.0	1914.00	TANG.	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D7173A	85.0	1914.00	RADIAL	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D7174A	270.0	1914.00	TANG.	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D7175A	0.0	839.50	AXIAL	+/- 10 g's	VIB. SRM		FWD SEG	
B08D7176A	0.0	839.50	TANG.	+/- 10 g's	VIB. SRM		FWD SEG	
B08D7177A	0.0	1479.50	AXIAL	+/- 10 g's	VIB. SRM		AFT CTR SEG	
B08D7178A	0.0	1479.50	TANG	+/- 10 g's	VIB. SRM		AFT CTR SEG	
B08D7179A	180.0	1479.50	TANG	+/- 10 g's	VIB. SRM		AFT CTR SEG	
B08G7259A	0.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7260A	0.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	LOST AT 270 SEC.
B08G7261A	270.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	SWITCHED WITH B08G7262A, DATA LOST CLIPPED
B08G7262A	270.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	SWITCHED WITH B08G7261A
B08G7263A	180.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7264A	180.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7265A	95.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	LOST AT 340 SEC.
B08G7266A	95.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7269A	N/A	611.48	HOOP	+6K,-2K	STRAIN, GIRTH		FWD SEG	SPIKE AT 320 AND 390 SEC.

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G7272A	N/A	771.48	HOOP	+6K,-2K	STRAIN, GIRTH		FWD SEG	DATA SPIKE AT .20 AND .26 SEC.
B08G7273A	N/A	846.78	HOOP	+6K,-2K	STRAIN, GIRTH	X	FWD SEG	
B08G7274A	N/A	848.53	HOOP	+6K,-2K	STRAIN, GIRTH	X	FWD SEG	
B08G7275A	N/A	850.17	HOOP	+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	GAGE LOST AT 370 SEC.
B08G7276A	N/A	852.58	HOOP	+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	
B08G7277A	N/A	855.03	HOOP	+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	
B08G7278A	N/A	857.28	HOOP	+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7279A	N/A	931.48	HOOP	+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	SPIKE AT 320 AND 370 SEC.
B08G7282A	N/A	1091.48	HOOP	+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	
B08G7283A	N/A	1166.78	HOOP	+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	
B08G7284A	N/A	1168.53	HOOP	+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7285A	N/A	1170.17	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	
B08G7286A	N/A	1172.58	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	SPIKE AT 320 AND 340 SEC.
B08G7287A	N/A	1175.03	HOOP	+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7288A	N/A	1177.28	HOOP	+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7289A	N/A	1251.48	HOOP	+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	
B08G7292A	N/A	1411.48	HOOP	+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7293A	N/A	1486.78	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	SPIKE AT 370 SEC.
B08G7294A	N/A	1488.53	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7295A	N/A	1490.17	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT SEG	GAGE LOST AT VAB, WAIVED
B08G7296A	N/A	1492.58	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT SEG	GAGE LOST AT VAB, WAIVED
B08G7297A	N/A	1495.03	HOOP	+6K,-2K	STRAIN, GIRTH		AFT SEG	
B08G7298A	N/A	1497.28	HOOP	+6K,-2K	STRAIN, GIRTH		AFT SEG	SPIKE AT 370 SEC.
B08G7301A	N/A	1637.48	HOOP	+6K,-2K	STRAIN, GIRTH		AFT SEG	
B08G7305A	N/A	1834.75	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT SEG	
B08G7306A	N/A	1836.20	HOOP	+6K,-2K	STRAIN, GIRTH	X	AFT SEG	
B08G7307A	N/A	1859.19	HOOP	+6K,-2K	STRAIN, GIRTH		AFT DOME	SPIKE AT .13 SEC.,LOST AT 300 SEC.
B08G7308A	N/A	1861.00	HOOP	+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	LOST AT 300 SEC.
B08G7310A	N/A	1875.65	HOOP	+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	LOST AT 300 SEC.
B08G7311A	N/A	1872.45	HOOP	+6K,-2K	STRAIN, GIRTH		AFT DOME	BAD, NOISY
B08G7312A	N/A	1872.95	HOOP	+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	BAD, NOISY
B08G7313A	N/A	1874.85	HOOP	+6K,-2K	STRAIN, GIRTH		AFT DOME	LOST AT 300 SEC.
B08G7314A	N/A	1875.65	HOOP	+6K,-2K	STRAIN, GIRTH		AFT DOME	LOST AT 300 SEC.

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G7315A	N/A	1876.25	HOOP	+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	LOST AT 300 SEC.
B08G7316A	5.0	486.40	AXIAL	+/-2K	STRAIN, BIAX		FWD DOME	
B08G7317A	5.0	486.40	TANG.	+6K,-2K	STRAIN, BIAX		FWD DOME	
B08G7318A	0.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G7319A	0.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G7320A	98.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	SPIKE AT 320 AND 370 SEC.
B08G7321A	98.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G7322A	180.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G7323A	180.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G7324A	270.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G7325A	270.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G7326A	0.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7327A	0.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7328A	98.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7329A	98.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7330A	180.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7331A	180.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7332A	270.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7333A	270.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G7334A	0.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7335A	0.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	BAD, NOISY
B08G7336A	98.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7337A	98.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7338A	180.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7339A	180.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7340A	270.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	LOST AT 250 SEC.
B08G7341A	270.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	LOST AT 250 SEC.
B08G7342A	0.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7343A	0.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7344A	0.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7345A	98.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7346A	180.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G7347A	180.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G7348A	270.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7349A	270.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G7368A	180.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7369A	180.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7370A	98.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7371A	98.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7372A	0.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7373A	0.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7374A	320.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G7375A
B08G7375A	320.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G7374A
B08G7376A	300.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7377A	300.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7378A	285.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7379A	285.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7380A	270.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7381A	270.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7382A	255.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7383A	255.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7384A	220.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7385A	220.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7386A	180.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7387A	180.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7388A	98.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7389A	98.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7390A	0.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7391A	0.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7392A	320.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G7393A
B08G7393A	320.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G7392A
B08G7394A	300.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7395A	300.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	LOST AT 340 SEC.
B08G7396A	285.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	GAGE LOST AT VAB, WAIVED
B08G7397A	285.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G7398A	270.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7399A	270.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7400A	255.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	GAGE LOST AT VAB, WAIVED
B08G7401A	255.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G7400A
B08G7402A	220.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7403A	220.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7404A	0.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7405A	0.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	GAGE LOST AT VAB, WAIVED
B08G7406A	98.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7407A	98.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7408A	180.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7409A	180.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7410A	270.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7411A	270.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7412A	0.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	LOST AT 320 SEC.
B08G7413A	0.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	BAD, NOISY
B08G7415A	0.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G7416A	0.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	LOST AT 320 SEC.
B08G7417A	90.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G7418A	90.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	
B08G7420A	90.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G7421A	90.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	
B08G7422A	180.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G7423A	180.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	BAD, NOISY
B08G7425A	180.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G7426A	180.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	LOST AT 320 SEC.
B08G7427A	270.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G7428A	270.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	
B08G7430A	270.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G7431A	270.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	LOST AT 320 SEC.
B08G7432A	90.0	1849.00	AXIAL	+/-2K	STRAIN, BIAX		FLEX BEARING	LOST AT 320 SEC.
B08G7433A	90.0	1849.00	TANG.	+6K,-2K	STRAIN, BIAX		FLEX BEARING	LOST AT 320 SEC.
B08G7434A	90.0	1829.20	AXIAL	+/-2K	STRAIN, BIAX		NOSE ASSY	LOST AT 320 SEC.

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G7435A	90.0	1829.20	TANG.	+6K,-2K	STRAIN, BIAX		NOSE ASSY	
B08G7448A	90.0	1865.00	AXIAL	+/-2K	STRAIN, BIAX		FWD EXIT CONE	
B08G7449A	90.0	1865.00	TANG.	+6K,-2K	STRAIN, BIAX		FWD EXIT CONE	
B08G7450A	90.0	1834.00	AXIAL	+/-2K	STRAIN, BIAX		THROAT ASSY	GAGE LOST AT VAB, WAIVED
B08G7451A	90.0	1834.00	TANG.	+6K,-2K	STRAIN, BIAX		THROAT ASSY	
B08G7452A	90.0	1908.00	AXIAL	+/-2K	STRAIN, BIAX		EXIT CONE	
B08G7453A	90.0	1908.00	TANG.	+6K,-2K	STRAIN, BIAX		EXIT CONE	
B08G7460A	220.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	GAGE LOST IN FLIGHT
B08G7461A	220.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	GAGE LOST IN FLIGHT
B08G7462A	255.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7463A	255.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7464A	285.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	GAGE LOST AT VAB, WAIVED
B08G7465A	285.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G7466A	320.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G7467A	320.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	GAGE LOST IN FLIGHT
B07P7390A	349.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7391A	319.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7392A	289.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7393A	259.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7394A	229.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7395A	199.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7396A	169.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7397A	139.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7398A	109.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7399A	79.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	GAGE LOST IN FLIGHT
B07P7400A	49.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07P7401A	19.0	763.50		0-10 psia	PRESS, SRM		FWD SEG	
B07T7606A	205.0	486.40		0-400 deg	TEMP, SRM		FWD DOME	
B07T7607A	0.0	846.30		0-400 deg	TEMP. SRM	X	FWD SEG	
B07T7608A	120.0	846.30		0-400 deg	TEMP. SRM	X	FWD SEG	
B07T7609A	240.0	846.30		0-400 deg	TEMP. SRM	X	FWD SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B07T7610A	0.0	1486.30		0-400 deg	TEMP. SRM	X	AFT CTR SEG	
B07T7611A	120.0	1486.30		0-400 deg	TEMP. SRM	X	AFT CTR SEG	
B07T7612A	240.0	1486.30		0-400 deg	TEMP. SRM	X	AFT CTR SEG	
B07T7613A	0.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T7614A	90.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T7615A	180.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T7616A	270.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T7617A	0.0	1828.10		0-400 deg	TEMP. SRM		NOSE ASSY	
B07T7618A	180.0	1828.10		-50 TO 750	TEMP. SRM		NOSE ASSY	
B07T7619A	0.0	1905.00		-50 TO 750	TEMP. SRM		EXIT CONE	
B07T7620A	90.0	1845.00		-50 TO 750	TEMP. SRM		THROAT ASSY	
B07T7621A	270.0	1845.00		-50 TO 750	TEMP. SRM		THROAT ASSY	GAGE LOST AT VAB, WAIVED
B07T7622A	180.0	1905.00		-50 TO 750	TEMP. SRM		EXIT CONE	
B07T7623A	0.0	1996.50		-50 TO 750	TEMP. SRM		EXIT CONE	
B07T7624A	120.0	1996.50		-50 TO 750	TEMP. SRM		EXIT CONE	
B07T7625A	240.0	1996.50		-50 TO 750	TEMP. SRM		EXIT CONE	
B47P1300A	40.0	487.00		0-1000 psia	OPT		IGNITER	
B47P1301A	180.0	487.00		0-1000 psia	OPT		IGNITER	
B47P1302A	270.0	487.00		0-1000 psia	OPT		IGNITER	BAD, NOISY
B47P7310A	115.0	487.00		0-3000 psia	PRESSURE, IGNITER CHAMBE		IGNITER	
		RIGHT RSRM						
B08D8151A	180.0	487.00	AXIAL	+/-400 g's	VIB. SRM		FWD DOME	
B08D8152A	180.0	487.00	RADIAL	+/-400 g's	VIB. SRM		FWD DOME	
B08D8153A	180.0	487.00	TANG	+/-400 g's	VIB. SRM		FWD DOME	
B08D8160A	0.0	500.00	AXIAL	+/- 10 g's	VIB. SRB		USBI INSTALLED	
B08D8161A	0.0	500.00	TANG.	+/- 10 g's	VIB. SRB		USBI INSTALLED	
B08D8163A	180.0	500.00	TANG.	+/- 10 g's	VIB. SRB		USBI INSTALLED	
B08D8164A	0.0	1159.50	AXIAL	+/- 10 g's	VIB. SRM		FWD CTR SEG	
B08D8165A	0.0	1159.50	TANG.	+/- 10 g's	VIB. SRM		FWD CTR SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08D8166A	0.0	1159.50	RADIAL	+/- 10 g's	VIB. SRM		FWD CTR SEG	
B08D8167A	0.0	1829.50	AXIAL	+/- 10 g's	VIB. SRM		AFT SEG	
B08D8168A	0.0	1829.50	TANG.	+/- 10 g's	VIB. SRM		AFT SEG	
B08D8170A	180.0	1829.50	RADIAL	+/- 10 g's	VIB. SRM		AFT SEG	
B08D8171A	85.0	1914.00	AXIAL	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D8172A	85.0	1914.00	TANG.	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D8173A	85.0	1914.00	RADIAL	+/- 10 g's	VIB. SRM		EXIT CONE	
B08D8174A	270.0	1914.00	TANG.	+/- 10 g's	VIB. SRM		EXIT CONE	GAGE LOST AT VAB, WAIVED
B08D8175A	0.0	839.50	AXIAL	+/- 10 g's	VIB. SRM		FWD SEG	
B08D8176A	0.0	839.50	TANG.	+/- 10 g's	VIB. SRM		FWD SEG	
B08D8177A	0.0	1479.50	AXIAL	+/- 10 g's	VIB. SRM		AFT CTR SEG	
B08D8178A	0.0	1479.50	TANG.	+/- 10 g's	VIB. SRM		AFT CTR SEG	
B08D8179A	180.0	1479.50	TANG.	+/- 10 g's	VIB. SRM		AFT CTR SEG	
B08G8251A	0.0	670.00	AXIAL	+/-2K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8252A	0.0	670.00	TANG.	-2K/+6K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8253A	85.0	670.00	AXIAL	+/-2K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8254A	85.0	670.00	TANG.	-2K/+6K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8255A	180.0	670.00	AXIAL	+/-2K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8256A	180.0	670.00	TANG.	-2K/+6K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8257A	270.0	670.00	AXIAL	+/-2K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8258A	270.0	670.00	TANG.	-2K/+6K	STRAIN,MEMBRANE,BIAX		FWD SEG	
B08G8259A	180.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8260A	180.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8261A	270.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G8262A	270.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8263A	0.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8264A	0.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8265A	85.0	1330.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8266A	85.0	1330.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8269A	N/A	611.48		+6K,-2K	STRAIN, GIRTH		FWD SEG	
B08G8272A	N/A	771.48		+6K,-2K	STRAIN, GIRTH		FWD SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G8273A	N/A	846.78		+6K,-2K	STRAIN, GIRTH	X	FWD SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8274A	N/A	848.53		+6K,-2K	STRAIN, GIRTH	X	FWD SEG	GAGE LOST AT VAB, WAIVED
B08G8275A	N/A	850.17		+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8276A	N/A	852.58		+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8277A	N/A	855.03		+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8278A	N/A	857.28		+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	GAGE LOST AT VAB, WAIVED
B08G8279A	N/A	931.48		+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	SPIKE AT .21 SEC.
B08G8282A	N/A	1091.48		+6K,-2K	STRAIN, GIRTH		FWD CTR SEG	SPIKE AT .21 SEC.
B08G8283A	N/A	1166.78		+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8284A	N/A	1168.53		+6K,-2K	STRAIN, GIRTH	X	FWD CTR SEG	GAGE LOST AT VAB, WAIVED
B08G8285A	N/A	1170.17		+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8286A	N/A	1172.58		+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	STRAIN LAGS PRESSURE CURVE BY .25 SEC.
B08G8287A	N/A	1175.03		+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	SPIKE AT .25 SEC.
B08G8288A	N/A	1177.28		+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	SPIKE AT .25 SEC.
B08G8289A	N/A	1251.48		+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	SPIKE AT .30 SEC.
B08G8292A	N/A	1411.48		+6K,-2K	STRAIN, GIRTH		AFT CTR SEG	
B08G8293A	N/A	1486.78		+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G8294A	N/A	1488.53		+6K,-2K	STRAIN, GIRTH	X	AFT CTR SEG	GAGE LOST AT VAB, WAIVED
B08G8295A	N/A	1490.17		+6K,-2K	STRAIN, GIRTH	X	AFT SEG	SPIKE AT .30 SEC.
B08G8296A	N/A	1492.58		+6K,-2K	STRAIN, GIRTH	X	AFT SEG	SPIKE AT .30 SEC.
B08G8297A	N/A	1495.03		+6K,-2K	STRAIN, GIRTH		AFT SEG	SPIKE AT .30 SEC.
B08G8298A	N/A	1497.28		+6K,-2K	STRAIN, GIRTH		AFT SEG	SPIKE AT .30 SEC.
B08G8301A	N/A	1637.48		+6K,-2K	STRAIN, GIRTH		AFT SEG	SPIKE AT .30 SEC.
B08G8305A	N/A	1834.75		+6K,-2K	STRAIN, GIRTH	X	AFT SEG	GAGE LOST AT VAB, WAIVED
B08G8306A	N/A	1836.20		+6K,-2K	STRAIN, GIRTH	X	AFT SEG	GAGE LOST AT VAB, WAIVED
B08G8307A	N/A	1859.19		+6K,-2K	STRAIN, GIRTH		AFT DOME	LOST AT 300 SEC.
B08G8308A	N/A	1861.00		+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	BAD, NOISY
B08G8310A	N/A	1875.65		+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	LOST AT 300 SEC.
B08G8311A	N/A	1872.45		+6K,-2K	STRAIN, GIRTH		AFT DOME	LOST AT 300 SEC.
B08G8312A	N/A	1872.95		+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	LOST AT 300 SEC.
B08G8313A	N/A	1874.85		+6K,-2K	STRAIN, GIRTH		AFT DOME	
B08G8314A	N/A	1875.65		+6K,-2K	STRAIN, GIRTH		AFT DOME	LOST AT 300 SEC.
B08G8315A	N/A	1876.25		+6K,-2K	STRAIN, GIRTH		FIXED HOUSING	LOST AT 300 SEC.

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G8316A	185.0	486.40	AXIAL	+/-2K	STRAIN, BIAX		FWD DOME	
B08G8317A	185.0	486.40	TANG.	+6K,-2K	STRAIN, BIAX		FWD DOME	
B08G8318A	180.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G8319A	180.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G8320A	82.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G8321A	82.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G8322A	0.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G8323A	0.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G8324A	270.0	556.48	AXIAL	+/-2K	STRAIN, BIAX		FWD SEG	
B08G8325A	270.0	556.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD SEG	
B08G8326A	180.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8327A	180.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8328A	82.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8329A	82.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8330A	0.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8331A	0.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8332A	270.0	876.48	AXIAL	+/-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8333A	270.0	876.48	TANG.	+6K,-2K	STRAIN, BIAX		FWD CTR SEG	
B08G8334A	180.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8335A	180.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8336A	82.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8337A	82.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8338A	0.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8339A	0.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8340A	270.0	1196.48	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8341A	270.0	1196.48	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8342A	180.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8343A	180.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8344A	82.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8345A	82.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8346A	0.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8347A	0.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G8348A	270.0	1466.00	AXIAL	+/-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8349A	270.0	1466.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT CTR SEG	
B08G8368A	0.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8369A	0.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8370A	82.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8371A	82.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8372A	180.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8373A	180.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8374A	220.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8375A	220.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8376A	240.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8377A	240.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8378A	255.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8379A	255.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8380A	270.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8381A	270.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8382A	285.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8383A	285.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8384A	320.0	1497.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8385A	320.0	1497.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8386A	0.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8387A	0.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8388A	82.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8389A	82.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8390A	180.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8391A	180.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8392A	220.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8393A	220.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8394A	240.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8395A	240.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8396A	255.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8397A	255.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8398A	270.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G8399A	270.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8400A	285.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8401A	285.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8402A	320.0	1501.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8403A	320.0	1501.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8404A	180.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8405A	180.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8406A	82.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8407A	82.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8408A	0.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8409A	0.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8410A	270.0	1797.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8411A	270.0	1797.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8412A	180.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8413A	180.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8415A	180.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G8416A	180.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	
B08G8417A	90.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8418A	90.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8420A	90.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G8421A	90.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	BAD, NOISY
B08G8422A	0.0	1871.80	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8423A	0.0	1871.80	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8425A	0.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G8426A	0.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	
B08G8427A	270.0	1871.00	AXIAL	+/-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8428A	270.0	1871.00	TANG.	+6K,-2K	STRAIN, BIAX		FIXED HOUSING	
B08G8430A	270.0	1874.18	TANG.	+6K,-2K	STRAIN, BIAX		AFT DOME	
B08G8431A	270.0	1874.18	AXIAL	+/-2K	STRAIN, BIAX		AFT DOME	LOST AT 310 SEC.
B08G8432A	90.0	1849.00	AXIAL	+/-2K	STRAIN, BIAX		FLEX BEARING	
B08G8433A	90.0	1849.00	TANG.	+6K,-2K	STRAIN, BIAX		FLEX BEARING	
B08G8434A	90.0	1829.20	AXIAL	+/-2K	STRAIN, BIAX		NOSE ASSY	
B08G8435A	90.0	1829.20	TANG.	+6K,-2K	STRAIN, BIAX		NOSE ASSY	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B08G8448A	90.0	1865.00	AXIAL	+/-2K	STRAIN, BIAX		FWD EXIT CONE	
B08G8449A	90.0	1865.00	TANG.	+6K,-2K	STRAIN, BIAX		FWD EXIT CONE	
B08G8450A	90.0	1834.00	AXIAL	+/-2K	STRAIN, BIAX		THROAT ASSY	
B08G8451A	90.0	1834.00	TANG.	+6K,-2K	STRAIN, BIAX		THROAT ASSY	
B08G8452A	90.0	1908.00	AXIAL	+/-2K	STRAIN, BIAX		EXIT CONE	
B08G8453A	90.0	1908.00	TANG.	+6K,-2K	STRAIN, BIAX		EXIT CONE	
B08G8460A	320.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8461A	320.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8462A	285.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G8463A, DATA LOST CLIPPED
B08G8463A	285.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	SWITCHED WITH B08G8462A
B08G8464A	255.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8465A	255.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B08G8466A	220.0	1511.00	AXIAL	+/-2K	STRAIN, BIAX		AFT SEG	
B08G8467A	220.0	1511.00	TANG.	+6K,-2K	STRAIN, BIAX		AFT SEG	
B07T8606A	205.0	486.40		0-400 deg	TEMP, SRM		FWD DOME	
B07T8607A	180.0	846.30		0-400 deg	TEMP. SRM	X	FWD SEG	BAD, DATA DROPOUT
B07T8608A	60.0	846.30		0-400 deg	TEMP. SRM	X	FWD SEG	
B07T8609A	300.0	846.30		0-400 deg	TEMP. SRM	X	FWD SEG	
B07T8610A	180.0	1486.30		0-400 deg	TEMP. SRM	X	AFT CTR SEG	
B07T8611A	60.0	1486.30		0-400 deg	TEMP. SRM	X	AFT CTR SEG	
B07T8612A	300.0	1486.30		0-400 deg	TEMP. SRM	X	AFT CTR SEG	
B07T8613A	180.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T8614A	90.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T8615A	0.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T8616A	270.0	1876.60		0-400 deg	TEMP. SRM		FIXED HOUSING	
B07T8617A	180.0	1828.10		0-400 deg	TEMP. SRM		NOSE ASSY	
B07T8618A	0.0	1828.10		-50 to 750	TEMP. SRM		NOSE ASSY	
B07T8619A	180.0	1905.00		-50 to 750	TEMP. SRM		EXIT CONE	
B07T8620A	90.0	1845.00		-50 to 750	TEMP. SRM		THROAT ASSY	
B07T8621A	270.0	1845.00		-50 to 750	TEMP. SRM		THROAT ASSY	
B07T8622A	0.0	1905.00		-50 to 750	TEMP. SRM		EXIT CONE	
B07T8623A	180.0	1996.50		-50 to 750	TEMP. SRM		EXIT CONE	

INST.NO	ANG LOC	STA	MEAS DIR	RANGE	MEAS TYPE	KSC INST	COMMENTS	INSTRUMENT CONDITION
B07T8624A	60.0	1996.50		-50 to 750	TEMP. SRM		EXIT CONE	
B07T8625A	300.0	1996.50		-50 to 750	TEMP. SRM		EXIT CONE	
B47P2300A	40.0	487.00		0-1000 psia	OPT		IGNITER	
B47P2301A	180.0	487.00		0-1000 psia	OPT		IGNITER	BAD, NOISY
B47P2302A	270.0	487.00		0-1000 psia	OPT		IGNITER	
B47P8310A	115.0	487.00		0-3000 psia	PRESSURE, IGNITER CHAMBE		IGNITER	

APPENDIX C

GFI Instrumentation List

INST. NO.	ANG. LOC.	STATION	RANGE	COMMENTS	INSTRUMENTATION CONDITION
		LEFT RSRM			
B06T7003A	270	534.5	+/-200 deg	FWD SEG	
B06T7004A	45	694.5	+/-200 deg	FWD SEG	
B06T7005A	135	694.5	+/-200 deg	FWD SEG	
B06T7006A	325	694.5	+/-200 deg	FWD SEG	
B06T7007A	270	694.5	+/-200 deg	FWD SEG	
B06T7008A	215	694.5	+/-200 deg	FWD SEG	
B06T7009A	90	778.98	+/-200 deg	FWD SEG (TUNNEL)	
B06T7010A	45	931.48	+/-200 deg	FWD/CTR SEG	
B06T7011A	135	931.48	+/-200 deg	FWD/CTR SEG	
B06T7012A	325	931.48	+/-200 deg	FWD/CTR SEG	
B06T7013A	270	931.48	+/-200 deg	FWD/CTR SEG	
B06T7014A	215	931.48	+/-200 deg	FWD/CTR SEG	
B06T7015A	45	1091.48	+/-200 deg	FWD/CTR SEG	
B06T7016A	135	1091.48	+/-200 deg	FWD/CTR SEG	GAGE LOST READS OPEN
B06T7017A	325	1091.48	+/-200 deg	FWD/CTR SEG	
B06T7018A	270	1091.48	+/-200 deg	FWD/CTR SEG	
B06T7019A	215	1091.48	+/-200 deg	FWD/CTR SEG	
B06T7020A	90	1258.98	+/-200 deg	AFT/CTR SEG(TUNNEL)	
B06T7021A	45	1411.48	+/-200 deg	AFT/CTR SEG	
B06T7022A	135	1411.48	+/-200 deg	AFT/CTR SEG	
B06T7023A	325	1411.48	+/-200 deg	AFT/CTR SEG	
B06T7024A	270	1411.48	+/-200 deg	AFT/CTR SEG	
B06T7025A	215	1411.48	+/-200 deg	AFT/CTR SEG	
B06T7026A	220	1511	+/-200 deg	ET RING	
B06T7027A	274	1511	+/-200 deg	ET RING	
B06T7028A	320	1511	+/-200 deg	ET RING	
B06T7029A	45	1535	+/-200 deg	AFT SEG	
B06T7030A	135	1535	+/-200 deg	AFT SEG	
B06T7031A	90	1565	+/-200 deg	AFT SEG (TUNNEL)	
B06T7032A	30	1701.86	+/-200 deg	AFT SEG	
B06T7033A	150	1701.86	+/-200 deg	AFT SEG	

INST. NO.	ANG. LOC.	STATION	RANGE	COMMENTS	INSTRUMENTATION CONDITION
B06T7034A	270	1701.86	+/-200 deg	AFT SEG	
B06T7035A	45	1751.5	+/-200 deg	AFT SEG	
B06T7036A	135	1751.5	+/-200 deg	AFT SEG	
B06T7037A	325	1751.5	+/-200 deg	AFT SEG	
B06T7038A	270	1751.5	+/-200 deg	AFT SEG	
B06T7039A	215	1751.5	+/-200 deg	AFT SEG	
B06T7040A	30	1821.00	+/-200 deg	AFT SEG	
B06T7041A	150	1821.00	+/-200 deg	AFT SEG	
B06T7042A	270	1821.00	+/-200 deg	AFT SEG	
B06T7043A	0	1847	+/-200 deg	FLEX BEARING	
B06T7044A	0	1845	+/-200 deg	NOZ THROAT	
B06T7045A	120	1847	+/-200 deg	FLEX BEARING	
B06T7046A	120	1845	+/-200 deg	NOZ THROAT	
B06T7047A	240	1847	+/-200 deg	FLEX BEARING	
B06T7048A	240	1845	+/-200 deg	NOZ THROAT	
B06T7049A	0	1876.6	+/-200 deg	NOZ/CASE JNT	
B06T7050A	120	1876.6	+/-200 deg	NOZ/CASE JNT	
B06T7051A	240	1876.6	+/-200 deg	NOZ/CASE JNT	
B06T7052A	0	1950	+/-200 deg	EXIT CONE	
B06T7053A	120	1950	+/-200 deg	EXIT CONE	
B06T7054A	240	1950	+/-200 deg	EXIT CONE	
B06T7085A	184.5	480.0	+/-200 deg	IGNITER	
B06T7086A	355.5	480.0	+/-200 deg	IGNITER	
		RIGHT RSRM			
B06T8003A	270	534.5	+/-200 deg	FWD SEG	
B06T8004A	135	694.5	+/-200 deg	FWD SEG	
B06T8005A	45	694.5	+/-200 deg	FWD SEG	
B06T8006A	215	694.5	+/-200 deg	FWD SEG	
B06T8007A	270	694.5	+/-200 deg	FWD SEG	
B06T8008A	325	694.5	+/-200 deg	FWD SEG	

INST. NO.	ANG. LOC.	STATION	RANGE	COMMENTS	INSTRUMENTATION CONDITION
B06T8009A	90	778.98	+/-200 deg	FWD SEG (TUNNEL)	
B06T8010A	135	931.48	+/-200 deg	FWD/CTR SEG	
B06T8011A	45	931.48	+/-200 deg	FWD/CTR SEG	
B06T8012A	215	931.48	+/-200 deg	FWD/CTR SEG	
B06T8013A	270	931.48	+/-200 deg	FWD/CTR SEG	
B06T8014A	325	931.48	+/-200 deg	FWD/CTR SEG	
B06T8015A	135	1091.48	+/-200 deg	FWD/CTR SEG	
B06T8016A	45	1091.48	+/-200 deg	FWD/CTR SEG	
B06T8017A	215	1091.48	+/-200 deg	FWD/CTR SEG	
B06T8018A	270	1091.48	+/-200 deg	FWD/CTR SEG	GAGE LOST READS OPEN
B06T8019A	325	1091.48	+/-200 deg	FWD/CTR SEG	
B06T8020A	90	1258.98	+/-200 deg	AFT/CTR SEG(TUNNEL)	
B06T8021A	135	1411.48	+/-200 deg	AFT/CTR SEG	
B06T8022A	45	1411.48	+/-200 deg	AFT/CTR SEG	
B06T8023A	215	1411.48	+/-200 deg	AFT/CTR SEG	
B06T8024A	270	1411.48	+/-200 deg	AFT/CTR SEG	
B06T8025A	325	1411.48	+/-200 deg	AFT/CTR SEG	
B06T8026A	320	1511	+/-200 deg	ET RING	
B06T8027A	266	1511	+/-200 deg	ET RING	
B06T8028A	220	1511	+/-200 deg	ET RING	
B06T8029A	135	1535	+/-200 deg	AFT SEG	
B06T8030A	45	1535	+/-200 deg	AFT SEG	
B06T8031A	90	1565	+/-200 deg	AFT SEG (TUNNEL)	
B06T8032A	150	1701.86	+/-200 deg	AFT SEG	
B06T8033A	30	1701.86	+/-200 deg	AFT SEG	
B06T8034A	270	1701.86	+/-200 deg	AFT SEG	
B06T8035A	135	1751.5	+/-200 deg	AFT SEG	
B06T8036A	45	1751.5	+/-200 deg	AFT SEG	
B06T8037A	215	1751.5	+/-200 deg	AFT SEG	
B06T8038A	270	1751.5	+/-200 deg	AFT SEG	
B06T8039A	325	1751.5	+/-200 deg	AFT SEG	
B06T8040A	150	1821	+/-200 deg	AFT SEG	
B06T8041A	30	1821	+/-200 deg	AFT SEG	

INST. NO.	ANG. LOC.	STATION	RANGE	COMMENTS	INSTRUMENTATION CONDITION
B06T8042A	270	1821	+/-200 deg	AFT SEG	
B06T8043A	180	1847	+/-200 deg	FLEX BEARING	
B06T8044A	180	1845	+/-200 deg	NOZ THROAT	
B06T8045A	60	1847	+/-200 deg	FLEX BEARING	
B06T8046A	60	1845	+/-200 deg	NOZ THROAT	
B06T8047A	300	1847	+/-200 deg	FLEX BEARING	
B06T8048A	300	1845	+/-200 deg	NOZ THROAT	
B06T8049A	180	1876.6	+/-200 deg	NOZ/CASE JNT	GAGE READS 8-11 DEG. LOW
B06T8050A	60	1876.6	+/-200 deg	NOZ/CASE JNT	
B06T8051A	300	1876.6	+/-200 deg	NOZ/CASE JNT	
B06T8052A	180	1950	+/-200 deg	EXIT CONE	
B06T8053A	60	1950	+/-200 deg	EXIT CONE	
B06T8054A	300	1950	+/-200 deg	EXIT CONE	
B06T8085A	4.5	480.0	+/-200 deg	IGNITER	
B06T8086A	175.5	480.0	+/-200 deg	IGNITER	

APPENDIX D

OFI Instrumentation List

INST.NO	ANG. LOC.	STA	RANGE	REQ. ACC.	DIG. (SPS)	COMMENTS	INSTRUMENTATION CONDITION
		LEFT RSRM					
B47P1300C	40.00	487.00	0-1000 psia	+/- 2%	5	CHAMBER PRESSURE	
B47P1301C	180.00	487.00	0-1000 psia	+/- 2%	1	CHAMBER PRESSURE	
B47P1302C	270.00	487.00	0-1000 psia	+/- 2%	12.5	CHAMBER PRESSURE	
		RIGHT RSRM					
B47P2300C	40.00	487.00	0-1000 psia	+/- 2%	5	CHAMBER PRESSURE	
B47P2301C	180.00	487.00	0-1000 psia	+/- 2%	1	CHAMBER PRESSURE	
B47P2302C	270.00	487.00	0-1000 psia	+/- 2%	12.5	CHAMBER PRESSURE	

DISTRIBUTION

Steve Morris	L10
Rex Riley	E16
Bryan Baugh	L36
Mike Williams	L36
Robin Jensen	L36
Neal Black	L36
Terrel Morgan	L10
John Wright	L36
Valerie Steineck	L36
Brian McQuivey	L10